

COMPRESSOR DEFINITION

Designation	EM 2C46CLC
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513304550

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 pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	7.23	[cm ³] (0.441 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO5	
4 Weight (with oil charge)	7.7	[kg] (16.98 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	8EA14B3/8EA14C3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	4TM302KFBYY-53	
6 Start winding resistance	5.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.19	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	8.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.18	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.50	[A] - Measured according to UL 984
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]
490	123	144	84	0.74	1.54	5.87	1.48	1.72

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)	295	74	86	56	0.50	0.92	5.23	1.32	1.53
-30	(-22)	378	95	111	65	0.57	1.19	5.88	1.48	1.72
-25	(-13)	483	122	141	73	0.64	1.51	6.69	1.68	1.96
-20	(- 4)	612	154	179	81	0.71	1.92	7.62	1.92	2.23
-15	(+ 5)	771	194	226	89	0.79	2.43	8.67	2.18	2.54
-10	(+14)	964	243	283	98	0.87	3.04	9.80	2.47	2.87

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)	265	67	78	58	0.52	0.83	4.62	1.16	1.35
-30	(-22)	361	91	106	68	0.60	1.13	5.33	1.34	1.56
-25	(-13)	476	120	139	77	0.68	1.49	6.16	1.55	1.81
-20	(- 4)	615	155	180	87	0.76	1.93	7.09	1.79	2.08
-15	(+ 5)	782	197	229	96	0.85	2.46	8.08	2.04	2.37
-10	(+14)	981	247	287	107	0.94	3.10	9.13	2.30	2.68

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)	229	58	67	57	0.52	0.72	4.05	1.02	1.19
-30	(-22)	328	83	96	68	0.61	1.03	4.77	1.20	1.40
-25	(-13)	446	112	131	80	0.71	1.40	5.58	1.41	1.63
-20	(- 4)	587	148	172	91	0.81	1.84	6.45	1.62	1.89
-15	(+ 5)	754	190	221	103	0.91	2.37	7.35	1.85	2.15
-10	(+14)	952	240	279	115	1.02	3.00	8.27	2.08	2.42

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	185	47	54	53	0.48	0.58	3.47	0.87	1.02
-30	(-22)	281	71	82	67	0.59	0.88	4.17	1.05	1.22
-25	(-13)	394	99	115	80	0.71	1.24	4.91	1.24	1.44
-20	(- 4)	528	133	155	93	0.83	1.66	5.68	1.43	1.66
-15	(+ 5)	688	173	202	107	0.95	2.17	6.45	1.63	1.89
-10	(+14)	877	221	257	122	1.08	2.77	7.20	1.81	2.11

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
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	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		