

COMPRESSOR DEFINITION

Designation	EM 2C46CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513304521

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 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 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		[hp]
2 Displacement	7.96	[cm ³] (0.486 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	17.600	
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)	8.3	[kg] (18.30 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	3(320)	[µF(VAC minimum)]
5 Motor protection	AE37FN	
6 Start winding resistance	19.45	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	29.05	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	3.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.50	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAE LBP-NOFAN 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]
462	116	135	74	0.34	1.45	6.22	1.57	1.82

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN 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)	276	70	81	51	0.25	0.86	5.37	1.35	1.57	
-30 (-22)	370	93	108	59	0.28	1.16	6.26	1.58	1.83	
-25 (-13)	483	122	142	67	0.32	1.52	7.18	1.81	2.10	
-20 (- 4)	618	156	181	76	0.36	1.94	8.17	2.06	2.40	
-15 (+ 5)	779	196	228	84	0.40	2.45	9.30	2.34	2.73	
-10 (+14)	970	245	284	92	0.43	3.06	10.60	2.67	3.11	

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN 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)	245	62	72	51	0.26	0.77	4.86	1.23	1.43	
-30 (-22)	338	85	99	59	0.30	1.06	5.69	1.43	1.67	
-25 (-13)	449	113	132	69	0.34	1.41	6.50	1.64	1.90	
-20 (- 4)	583	147	171	79	0.38	1.83	7.34	1.85	2.15	
-15 (+ 5)	744	188	218	90	0.43	2.34	8.26	2.08	2.42	
-10 (+14)	936	236	274	101	0.48	2.95	9.31	2.35	2.73	

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN 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)	223	56	65	51	0.26	0.70	4.39	1.11	1.29	
-30 (-22)	310	78	91	60	0.30	0.97	5.19	1.31	1.52	
-25 (-13)	417	105	122	70	0.35	1.31	5.92	1.49	1.73	
-20 (- 4)	547	138	160	82	0.41	1.72	6.63	1.67	1.94	
-15 (+ 5)	705	178	207	95	0.46	2.22	7.38	1.86	2.16	
-10 (+14)	893	225	262	109	0.52	2.82	8.20	2.07	2.40	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN 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)	209	53	61	52	0.25	0.65	3.96	1.00	1.16
-30	(-22)	288	73	84	61	0.30	0.90	4.75	1.20	1.39
-25	(-13)	387	97	113	72	0.36	1.21	5.43	1.37	1.59
-20	(- 4)	510	128	149	85	0.42	1.60	6.05	1.52	1.77
-15	(+ 5)	660	166	194	100	0.49	2.08	6.65	1.68	1.95
-10	(+14)	842	212	247	115	0.56	2.66	7.29	1.84	2.14

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
2 Tray holder	No		
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° up + 45° to Back		
3.2 DISCHARGE	5.1 +0.10/+0.00	[mm]	(0.201" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 90° up + 24° to Back		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		