

COMPRESSOR DEFINITION

Designation	EM 2C46CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513304512

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	M.I.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			CECOMAFLBP-NOFAN Static		Evaporating temperature (Condensing temperature	-25°C (-13°F) 55°C (131°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]
348	88	102	71	0.32	1.33	4.88	1.23	1.43

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF-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)	263	66	77	49	0.22	0.84	5.28	1.33	1.55	
-30 (-22)	358	90	105	58	0.25	1.15	6.15	1.55	1.80	
-25 (-13)	469	118	137	67	0.28	1.51	7.07	1.78	2.07	
-20 (- 4)	600	151	176	75	0.32	1.93	8.07	2.03	2.37	
-15 (+ 5)	756	191	222	83	0.36	2.43	9.20	2.32	2.69	
-10 (+14)	943	238	276	90	0.39	3.04	10.48	2.64	3.07	

TEST CONDITIONS: @220V50Hz		CECOMAF-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)	220	55	64	50	0.22	0.76	4.44	1.12	1.30	
-30 (-22)	307	77	90	59	0.25	1.07	5.17	1.30	1.52	
-25 (-13)	407	103	119	69	0.29	1.42	5.90	1.49	1.73	
-20 (- 4)	526	132	154	78	0.34	1.83	6.67	1.68	1.95	
-15 (+ 5)	668	168	196	89	0.39	2.33	7.51	1.89	2.20	
-10 (+14)	839	211	246	99	0.44	2.94	8.47	2.13	2.48	

TEST CONDITIONS: @220V50Hz		CECOMAF-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)	183	46	54	51	0.21	0.70	3.67	0.92	1.07	
-30 (-22)	260	65	76	60	0.25	0.99	4.31	1.09	1.26	
-25 (-13)	348	88	102	71	0.30	1.33	4.90	1.24	1.44	
-20 (- 4)	452	114	133	82	0.36	1.73	5.49	1.38	1.61	
-15 (+ 5)	578	146	169	94	0.42	2.21	6.11	1.54	1.79	
-10 (+14)	731	184	214	107	0.48	2.81	6.79	1.71	1.99	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF-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)	153	39	45	51	0.22	0.65	2.98	0.75	0.87
-30	(-22)	217	55	64	60	0.26	0.91	3.58	0.90	1.05
-25	(-13)	291	73	85	71	0.31	1.23	4.10	1.03	1.20
-20	(- 4)	380	96	111	84	0.38	1.61	4.55	1.15	1.33
-15	(+ 5)	488	123	143	98	0.45	2.08	5.00	1.26	1.46
-10	(+14)	621	156	182	114	0.53	2.65	5.46	1.38	1.60

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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° 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		