

COMPRESSOR DEFINITION

Designation	EM 2C40CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513304517

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 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		[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)	7.68	[kg] (16.93 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	PTC	
2.1 Starting device	MI2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2(310)/2.5(310)/3(310)	[µF(VAC minimum)]
5 Motor protection	AE37FN	
6 Start winding resistance	26.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	26.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	3.60	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.55	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - 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]
416	105	122	70	0.30		5.93	1.49	1.74

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)	233	59	68	45	0.21	0.73	5.12	1.29	1.50	
-30 (-22)	319	80	93	53	0.23	1.00	5.98	1.51	1.75	
-25 (-13)	428	108	125	61	0.26	1.34	6.98	1.76	2.05	
-20 (- 4)	560	141	164	69	0.29	1.76	8.11	2.04	2.38	
-15 (+ 5)	713	180	209	77	0.33	2.24	9.34	2.35	2.74	
-10 (+14)	887	224	260	84	0.37	2.80	10.64	2.68	3.12	

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)	214	54	63	48	0.21	0.67	4.50	1.13	1.32	
-30 (-22)	296	75	87	56	0.24	0.93	5.30	1.33	1.55	
-25 (-13)	402	101	118	65	0.27	1.26	6.20	1.56	1.82	
-20 (- 4)	531	134	156	74	0.31	1.67	7.19	1.81	2.11	
-15 (+ 5)	682	172	200	83	0.36	2.15	8.25	2.08	2.42	
-10 (+14)	854	215	250	91	0.40	2.70	9.35	2.36	2.74	

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)	196	49	58	49	0.21	0.61	4.05	1.02	1.19	
-30 (-22)	273	69	80	57	0.24	0.86	4.78	1.20	1.40	
-25 (-13)	375	94	110	67	0.28	1.18	5.59	1.41	1.64	
-20 (- 4)	500	126	146	77	0.33	1.57	6.45	1.63	1.89	
-15 (+ 5)	647	163	190	88	0.38	2.04	7.35	1.85	2.15	
-10 (+14)	816	206	239	99	0.44	2.58	8.26	2.08	2.42	

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)	181	46	53	49	0.22	0.57	3.71	0.93	1.09
-30	(-22)	252	63	74	58	0.26	0.79	4.39	1.11	1.29
-25	(-13)	347	87	102	68	0.30	1.09	5.11	1.29	1.50
-20	(- 4)	466	118	137	80	0.35	1.47	5.85	1.48	1.72
-15	(+ 5)	609	153	178	92	0.41	1.92	6.60	1.66	1.93
-10	(+14)	774	195	227	106	0.47	2.44	7.33	1.85	2.15

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 parallel BP+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		