

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 - ELECTRICAL 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	TSD-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2(310)/2.5(310)/3(310)	[µF(VAC minimum)]
5 Motor protection	4TM134NFBYY-73	
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 - IRAM - 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 (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
416	105	122	68	0.30		6.10	1.54	1.79

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32-NOFAN Static		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	233	59	68	43	0.21	0.73	5.35	1.35	1.57
-30	(-22)	319	80	93	51	0.23	1.00	6.21	1.57	1.82
-25	(-13)	428	108	125	59	0.26	1.34	7.22	1.82	2.12
-20	(- 4)	560	141	164	67	0.29	1.76	8.35	2.10	2.45
-15	(+ 5)	713	180	209	75	0.33	2.24	9.59	2.42	2.81
-10	(+14)	887	224	260	82	0.37	2.80	10.91	2.75	3.20

TEST CONDITIONS: @220V50Hz			ASHRAE32-NOFAN Static		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	214	54	63	46	0.21	0.67	4.70	1.18	1.38
-30	(-22)	296	75	87	54	0.24	0.93	5.49	1.38	1.61
-25	(-13)	402	101	118	63	0.27	1.26	6.40	1.61	1.87
-20	(- 4)	531	134	156	72	0.31	1.67	7.39	1.86	2.17
-15	(+ 5)	682	172	200	81	0.36	2.15	8.45	2.13	2.48
-10	(+14)	854	215	250	89	0.40	2.70	9.56	2.41	2.80

TEST CONDITIONS: @220V50Hz			ASHRAE32-NOFAN Static		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	196	49	58	47	0.21	0.61	4.22	1.06	1.24
-30	(-22)	273	69	80	55	0.24	0.86	4.95	1.25	1.45
-25	(-13)	375	94	110	65	0.28	1.18	5.76	1.45	1.69
-20	(- 4)	500	126	146	75	0.33	1.57	6.62	1.67	1.94
-15	(+ 5)	647	163	190	86	0.38	2.04	7.52	1.90	2.20
-10	(+14)	816	206	239	97	0.44	2.58	8.43	2.13	2.47

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	181	46	53	47	0.22	0.57	3.87	0.97	1.13
-30	(-22)	252	63	74	56	0.26	0.79	4.54	1.15	1.33
-25	(-13)	347	87	102	66	0.30	1.09	5.26	1.33	1.54
-20	(- 4)	466	118	137	78	0.35	1.47	6.01	1.51	1.76
-15	(+ 5)	609	153	178	90	0.41	1.92	6.75	1.70	1.98
-10	(+14)	774	195	227	104	0.47	2.44	7.47	1.88	2.19

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		