

COMPRESSOR DEFINITION

Designation	EM 2C55CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513304634

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	9.04	[cm ³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	20.000	
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)	8.36	[kg] (18.43 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	PTC	
2.1 Starting device	MI2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(310)/4(300)	[µF(VAC minimum)]
5 Motor protection	AE64FS	
6 Start winding resistance	18.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	20.80	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	4.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.65	[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 (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]
519	131	152	86	0.45	1.63	6.07	1.53	1.78

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)	303	76	89	58	0.31	0.95	5.23	1.32	1.53
-30	(-22)	416	105	122	67	0.36	1.30	6.22	1.57	1.82
-25	(-13)	541	136	159	76	0.40	1.70	7.16	1.80	2.10
-20	(- 4)	687	173	201	85	0.44	2.16	8.11	2.04	2.38
-15	(+ 5)	862	217	253	94	0.48	2.71	9.13	2.30	2.67
-10	(+14)	1075	271	315	104	0.52	3.39	10.28	2.59	3.01

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)	278	70	81	58	0.32	0.87	4.78	1.21	1.40
-30	(-22)	387	98	113	68	0.37	1.21	5.64	1.42	1.65
-25	(-13)	508	128	149	79	0.42	1.59	6.43	1.62	1.88
-20	(- 4)	649	164	190	90	0.47	2.04	7.22	1.82	2.11
-15	(+ 5)	819	206	240	102	0.52	2.58	8.06	2.03	2.36
-10	(+14)	1027	259	301	114	0.57	3.24	9.02	2.27	2.64

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)	250	63	73	58	0.32	0.78	4.34	1.09	1.27
-30	(-22)	355	90	104	69	0.38	1.11	5.11	1.29	1.50
-25	(-13)	472	119	138	81	0.43	1.48	5.80	1.46	1.70
-20	(- 4)	609	153	178	94	0.49	1.91	6.47	1.63	1.90
-15	(+ 5)	774	195	227	108	0.54	2.44	7.18	1.81	2.10
-10	(+14)	977	246	286	122	0.61	3.08	7.99	2.01	2.34

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)	218	55	64	56	0.31	0.68	3.90	0.98	1.14
-30	(-22)	321	81	94	69	0.37	1.01	4.63	1.17	1.36
-25	(-13)	434	109	127	82	0.43	1.36	5.26	1.33	1.54
-20	(- 4)	566	143	166	97	0.49	1.78	5.86	1.48	1.72
-15	(+ 5)	727	183	213	112	0.56	2.29	6.49	1.64	1.90
-10	(+14)	925	233	271	128	0.63	2.92	7.20	1.82	2.11

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal
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	Slanted 42° up + 45° to Back
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	Slanted 30° up + 24° to Back
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	Slanted 43° up + 45° to Back
3.4 Oil cooler (Copper)	No [mm]
3.5 Connector sealing	Rubber Plugs