

COMPRESSOR DEFINITION

Designation	EM 2C66CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513304535

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	1/5	[hp]
2 Displacement	10.61	[cm ³] (0.647 cu.in)
2.1 Bore [mm]	26.000	
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 - 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	TSD-220V	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	5(310)/4(310)	[μF(VAC minimum)]
5 Motor protection	4TM189NFBYY-53	
6 Start winding resistance	13.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.77	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

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]
611	154	179	97	0.49	1.92	6.28	1.58	1.84

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)	345	87	101	61	0.33	1.08	5.60	1.41	1.64
-30 (-22)	472	119	138	73	0.38	1.48	6.45	1.62	1.89
-25 (-13)	621	156	182	85	0.43	1.95	7.36	1.85	2.16
-20 (- 4)	798	201	234	96	0.48	2.51	8.33	2.10	2.44
-15 (+ 5)	1009	254	296	108	0.53	3.17	9.37	2.36	2.75
-10 (+14)	1258	317	369	120	0.59	3.97	10.46	2.63	3.06

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)	320	81	94	63	0.34	1.00	5.09	1.28	1.49
-30 (-22)	445	112	130	76	0.40	1.39	5.86	1.48	1.72
-25 (-13)	592	149	173	89	0.45	1.86	6.68	1.68	1.96
-20 (- 4)	766	193	224	102	0.51	2.41	7.54	1.90	2.21
-15 (+ 5)	972	245	285	115	0.57	3.06	8.45	2.13	2.47
-10 (+14)	1217	307	356	129	0.63	3.84	9.39	2.37	2.75

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)	289	73	85	64	0.34	0.91	4.55	1.15	1.33
-30 (-22)	411	104	121	78	0.40	1.29	5.25	1.32	1.54
-25 (-13)	554	140	162	92	0.47	1.74	5.99	1.51	1.75
-20 (- 4)	723	182	212	107	0.53	2.27	6.75	1.70	1.98
-15 (+ 5)	923	233	270	122	0.60	2.91	7.54	1.90	2.21
-10 (+14)	1160	292	340	139	0.68	3.66	8.35	2.10	2.45

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)	254	64	74	64	0.33	0.80	3.98	1.00	1.17
-30	(-22)	371	93	109	80	0.41	1.16	4.63	1.17	1.36
-25	(-13)	507	128	149	96	0.48	1.59	5.29	1.33	1.55
-20	(- 4)	669	168	196	112	0.55	2.10	5.97	1.51	1.75
-15	(+ 5)	861	217	252	129	0.63	2.71	6.66	1.68	1.95
-10	(+14)	1089	274	319	148	0.72	3.44	7.35	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 48° 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		