

### COMPRESSOR DEFINITION

Designation	EM D20CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	710BA89

### 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-Medium Back Pressure (Light Commercial)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°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)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
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 <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	3.97	[cm <sup>3</sup> ] (0.242 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO2	
4 Weight (with oil charge)	7.7	[kg] (16.98 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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	TSD2-220V/TSD2-220V1.2/TSD2-D-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2(350)/2.5(350)/4(350)	[µF(VAC minimum)]
5 Motor protection	4TM 110NFBYY-73	
6 Start winding resistance	37.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	49.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	2.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[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]
163	41	48	33	0.17	0.62	4.91	1.24	1.44

### 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)	130	33	38	24	0.12	0.42	5.43	1.37	1.59
-30	(-22)	175	44	51	27	0.13	0.56	6.49	1.64	1.90
-25	(-13)	232	58	68	31	0.15	0.74	7.41	1.87	2.17
-20	(- 4)	299	75	88	36	0.17	0.96	8.35	2.10	2.45
-15	(+ 5)	376	95	110	40	0.18	1.21	9.45	2.38	2.77
-10	(+14)	463	117	136	44	0.19	1.49	10.86	2.74	3.18
-5	(+23)	559	141	164	45	0.20	1.81	12.72	3.21	3.73
0	(+32)	664	167	195	43	0.20	2.15	15.20	3.83	4.45

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)	99	25	29	24	0.12	0.34	4.23	1.06	1.24
-30	(-22)	141	35	41	27	0.13	0.49	5.22	1.31	1.53
-25	(-13)	193	49	56	32	0.15	0.67	6.01	1.51	1.76
-20	(- 4)	255	64	75	37	0.17	0.89	6.76	1.70	1.98
-15	(+ 5)	327	82	96	43	0.19	1.14	7.61	1.92	2.23
-10	(+14)	407	103	119	47	0.21	1.43	8.71	2.20	2.55
-5	(+23)	496	125	145	49	0.22	1.74	10.22	2.57	2.99
0	(+32)	593	150	174	48	0.23	2.09	12.27	3.09	3.60

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)	78	20	23	24	0.12	0.30	3.30	0.83	0.97
-30	(-22)	115	29	34	27	0.14	0.44	4.23	1.07	1.24
-25	(-13)	162	41	48	33	0.16	0.62	4.91	1.24	1.44
-20	(- 4)	218	55	64	40	0.19	0.83	5.49	1.38	1.61
-15	(+ 5)	284	71	83	46	0.21	1.09	6.11	1.54	1.79
-10	(+14)	357	90	105	51	0.23	1.37	6.93	1.75	2.03
-5	(+23)	438	110	128	54	0.26	1.69	8.09	2.04	2.37
0	(+32)	527	133	154	55	0.27	2.03	9.74	2.45	2.85

### 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)	54	14	16	21	0.11	0.23	2.48	0.62	0.73
-30	(-22)	86	22	25	26	0.13	0.36	3.38	0.85	0.99
-25	(-13)	127	32	37	33	0.16	0.54	3.96	1.00	1.16
-20	(- 4)	176	44	52	41	0.19	0.75	4.38	1.10	1.28
-15	(+ 5)	234	59	69	48	0.22	0.99	4.79	1.21	1.40
-10	(+14)	299	75	88	55	0.25	1.27	5.34	1.35	1.57
-5	(+23)	371	94	109	59	0.28	1.59	6.17	1.56	1.81
0	(+32)	450	113	132	61	0.31	1.93	7.44	1.87	2.18

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
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 42° up + 45° 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		