

COMPRESSOR DEFINITION

Designation	EM E20CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	711DA90

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	187 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	187 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	3.97	[cm ³] (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)	8.1	[kg] (17.86 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	TSD2-220V/TSD2-220V1.2/TSD2-D-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2(350)/2.5(350)/3(350)/4(350)	[µF(VAC minimum)]
5 Motor protection	4TM129KDB	
6 Start winding resistance	23.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	45.30	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[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]
167	42	49	33	0.15	0.64	5.11	1.29	1.50

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)	137	34	40	22	0.12	0.44	6.14	1.55	1.80
-30	(-22)	183	46	54	26	0.13	0.59	7.09	1.79	2.08
-25	(-13)	236	60	69	29	0.14	0.76	8.06	2.03	2.36
-20	(- 4)	300	76	88	33	0.16	0.96	9.13	2.30	2.68
-15	(+ 5)	376	95	110	36	0.17	1.21	10.35	2.61	3.03
-10	(+14)	468	118	137	40	0.19	1.51	11.78	2.97	3.45

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)	109	27	32	22	0.12	0.38	4.86	1.22	1.42
-30	(-22)	153	39	45	27	0.13	0.53	5.70	1.44	1.67
-25	(-13)	203	51	59	31	0.15	0.71	6.49	1.64	1.90
-20	(- 4)	260	65	76	36	0.17	0.91	7.29	1.84	2.14
-15	(+ 5)	326	82	96	40	0.19	1.14	8.16	2.06	2.39
-10	(+14)	406	102	119	44	0.21	1.42	9.16	2.31	2.68

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)	74	19	22	21	0.11	0.28	3.61	0.91	1.06
-30	(-22)	121	30	35	27	0.13	0.46	4.47	1.13	1.31
-25	(-13)	170	43	50	32	0.15	0.65	5.21	1.31	1.53
-20	(- 4)	224	56	66	38	0.18	0.85	5.87	1.48	1.72
-15	(+ 5)	284	72	83	44	0.20	1.09	6.53	1.64	1.91
-10	(+14)	355	89	104	49	0.23	1.36	7.23	1.82	2.12

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° 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		