

COMPRESSOR DEFINITION

Designation	EM D20CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	710BA90

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 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)	7.7	[kg] (16.98 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	PTC	
2.1 Starting device	MI2021/V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2(350)/2.5(350)/4(350)	[µF(VAC minimum)]
5 Motor protection	AE23AHNX	
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	35	0.17	0.62	4.63	1.17	1.36

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	26	0.12	0.42	5.01	1.26	1.47
-30	(-22)	175	44	51	29	0.13	0.56	6.05	1.52	1.77
-25	(-13)	232	58	68	33	0.15	0.74	6.97	1.76	2.04
-20	(- 4)	299	75	88	38	0.17	0.96	7.91	1.99	2.32
-15	(+ 5)	376	95	110	42	0.18	1.21	9.00	2.27	2.64
-10	(+14)	463	117	136	45	0.19	1.49	10.37	2.61	3.04
-5	(+23)	559	141	164	47	0.20	1.81	12.17	3.07	3.57
0	(+32)	664	167	195	45	0.20	2.15	14.53	3.66	4.26

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	26	0.12	0.34	3.90	0.98	1.14
-30	(-22)	141	35	41	29	0.13	0.49	4.86	1.23	1.42
-25	(-13)	193	49	56	34	0.15	0.67	5.66	1.43	1.66
-20	(- 4)	255	64	75	39	0.17	0.89	6.41	1.62	1.88
-15	(+ 5)	327	82	96	45	0.19	1.14	7.27	1.83	2.13
-10	(+14)	407	103	119	49	0.21	1.43	8.36	2.11	2.45
-5	(+23)	496	125	145	51	0.22	1.74	9.81	2.47	2.88
0	(+32)	593	150	174	50	0.23	2.09	11.77	2.97	3.45

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	26	0.12	0.30	3.04	0.77	0.89
-30	(-22)	115	29	34	29	0.14	0.44	3.95	1.00	1.16
-25	(-13)	162	41	48	35	0.16	0.62	4.63	1.17	1.36
-20	(- 4)	218	55	64	42	0.19	0.83	5.23	1.32	1.53
-15	(+ 5)	284	71	83	48	0.21	1.09	5.86	1.48	1.72
-10	(+14)	357	90	105	53	0.23	1.37	6.67	1.68	1.96
-5	(+23)	438	110	128	56	0.26	1.69	7.80	1.97	2.29
0	(+32)	527	133	154	57	0.27	2.03	9.37	2.36	2.75

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	23	0.11	0.23	2.27	0.57	0.67
-30	(-22)	86	22	25	28	0.13	0.36	3.14	0.79	0.92
-25	(-13)	127	32	37	35	0.16	0.54	3.73	0.94	1.09
-20	(- 4)	176	44	52	43	0.19	0.75	4.17	1.05	1.22
-15	(+ 5)	234	59	69	50	0.22	0.99	4.61	1.16	1.35
-10	(+14)	299	75	88	57	0.25	1.27	5.16	1.30	1.51
-5	(+23)	371	94	109	61	0.28	1.59	5.97	1.51	1.75
0	(+32)	450	113	132	63	0.31	1.93	7.18	1.81	2.10

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		