

COMPRESSOR DEFINITION

Designation	EM D80CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701SA77

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	12.21	[cm ³] (0.745 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	23.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
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	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)	[µF(VAC minimum)]
5 Motor protection	4TM276KFBYY-73	
6 Start winding resistance	23.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.80	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.84	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.57	[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]
552	139	162	110	0.54	2.10	5.01	1.26	1.47

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)	421	106	123	75	0.39	1.35	5.59	1.41	1.64
-30	(-22)	559	141	164	87	0.44	1.80	6.43	1.62	1.89
-25	(-13)	724	183	212	100	0.49	2.33	7.28	1.83	2.13
-20	(- 4)	922	232	270	113	0.56	2.96	8.15	2.05	2.39
-15	(+ 5)	1157	292	339	127	0.62	3.72	9.07	2.29	2.66
-10	(+14)	1434	361	420	142	0.68	4.62	10.06	2.54	2.95

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)	360	91	105	76	0.39	1.25	4.72	1.19	1.38
-30	(-22)	487	123	143	90	0.45	1.69	5.42	1.37	1.59
-25	(-13)	637	160	187	104	0.52	2.22	6.10	1.54	1.79
-20	(- 4)	813	205	238	120	0.59	2.84	6.80	1.71	1.99
-15	(+ 5)	1023	258	300	136	0.66	3.57	7.52	1.90	2.20
-10	(+14)	1270	320	372	153	0.73	4.44	8.31	2.09	2.43

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)	300	76	88	77	0.40	1.14	3.89	0.98	1.14
-30	(-22)	417	105	122	93	0.46	1.59	4.47	1.13	1.31
-25	(-13)	552	139	162	110	0.54	2.10	5.03	1.27	1.47
-20	(- 4)	709	179	208	127	0.62	2.71	5.57	1.40	1.63
-15	(+ 5)	893	225	262	146	0.70	3.42	6.13	1.55	1.80
-10	(+14)	1110	280	325	165	0.79	4.26	6.73	1.70	1.97

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)	238	60	70	77	0.39	1.01	3.11	0.78	0.91
-30	(-22)	346	87	101	95	0.47	1.46	3.60	0.91	1.06
-25	(-13)	466	118	137	115	0.55	1.97	4.05	1.02	1.19
-20	(- 4)	604	152	177	135	0.64	2.56	4.47	1.13	1.31
-15	(+ 5)	764	192	224	156	0.74	3.25	4.90	1.23	1.43
-10	(+14)	951	240	279	178	0.84	4.06	5.34	1.34	1.56

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	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		