

COMPRESSOR DEFINITION

Designation	EM C80CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701EA77

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		[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)	8.15	[kg] (17.97 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	5(350)	[µF(VAC minimum)]
5 Motor protection	CP4TMC288K61A5	
6 Start winding resistance	16.56	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	17.44	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.90	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.92	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.14	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

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]
733	185	215	117	0.55	2.30	6.24	1.57	1.83

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)	407	103	119	76	0.35	1.27	5.37	1.35	1.57
-30 (-22)	555	140	163	89	0.41	1.74	6.23	1.57	1.83
-25 (-13)	729	184	214	102	0.47	2.29	7.15	1.80	2.09
-20 (- 4)	934	235	274	116	0.53	2.93	8.10	2.04	2.37
-15 (+ 5)	1174	296	344	129	0.60	3.69	9.10	2.29	2.67
-10 (+14)	1453	366	426	143	0.67	4.58	10.12	2.55	2.96

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)	392	99	115	77	0.36	1.23	5.07	1.28	1.49
-30 (-22)	536	135	157	92	0.42	1.68	5.81	1.46	1.70
-25 (-13)	707	178	207	107	0.49	2.22	6.58	1.66	1.93
-20 (- 4)	909	229	266	123	0.57	2.85	7.38	1.86	2.16
-15 (+ 5)	1146	289	336	140	0.65	3.61	8.19	2.06	2.40
-10 (+14)	1423	358	417	158	0.73	4.49	9.02	2.27	2.64

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)	365	92	107	78	0.36	1.14	4.67	1.18	1.37
-30 (-22)	504	127	148	95	0.43	1.58	5.32	1.34	1.56
-25 (-13)	669	169	196	112	0.50	2.10	5.99	1.51	1.75
-20 (- 4)	866	218	254	130	0.59	2.72	6.67	1.68	1.95
-15 (+ 5)	1098	277	322	149	0.68	3.46	7.34	1.85	2.15
-10 (+14)	1371	346	402	171	0.78	4.33	8.01	2.02	2.35

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)	324	82	95	77	0.36	1.02	4.19	1.06	1.23
-30	(-22)	456	115	134	95	0.43	1.43	4.80	1.21	1.41
-25	(-13)	615	155	180	114	0.52	1.93	5.40	1.36	1.58
-20	(- 4)	805	203	236	134	0.62	2.53	6.00	1.51	1.76
-15	(+ 5)	1031	260	302	157	0.72	3.25	6.58	1.66	1.93
-10	(+14)	1298	327	380	182	0.84	4.10	7.13	1.80	2.09

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		