

COMPRESSOR DEFINITION

Designation	EM C80CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701UA77

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)	8.15	[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	M.I.E-START 2021	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(300)	[µF(VAC minimum)]
5 Motor protection	AE15BU	
6 Start winding resistance	23.17	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.86	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.12	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.22	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.48	[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)	442	111	130	71	0.36	1.38	6.18	1.56	1.81	
-30 (-22)	578	146	169	85	0.42	1.81	6.83	1.72	2.00	
-25 (-13)	750	189	220	99	0.48	2.35	7.62	1.92	2.23	
-20 (- 4)	961	242	282	113	0.54	3.02	8.53	2.15	2.50	
-15 (+ 5)	1209	305	354	127	0.61	3.80	9.53	2.40	2.79	
-10 (+14)	1495	377	438	141	0.68	4.71	10.58	2.67	3.10	

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)	411	104	120	77	0.37	1.29	5.38	1.36	1.58	
-30 (-22)	545	137	160	91	0.43	1.71	6.00	1.51	1.76	
-25 (-13)	716	181	210	106	0.50	2.25	6.73	1.70	1.97	
-20 (- 4)	924	233	271	122	0.57	2.90	7.55	1.90	2.21	
-15 (+ 5)	1168	294	342	138	0.65	3.68	8.43	2.12	2.47	
-10 (+14)	1448	365	424	155	0.73	4.57	9.33	2.35	2.73	

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)	376	95	110	79	0.37	1.18	4.80	1.21	1.41	
-30 (-22)	507	128	149	94	0.44	1.59	5.38	1.36	1.58	
-25 (-13)	673	170	197	111	0.52	2.11	6.04	1.52	1.77	
-20 (- 4)	875	221	256	129	0.60	2.75	6.76	1.70	1.98	
-15 (+ 5)	1112	280	326	148	0.69	3.50	7.51	1.89	2.20	
-10 (+14)	1385	349	406	168	0.79	4.37	8.26	2.08	2.42	

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)	334	84	98	76	0.36	1.05	4.40	1.11	1.29
-30	(-22)	460	116	135	93	0.45	1.44	4.93	1.24	1.44
-25	(-13)	619	156	181	112	0.54	1.94	5.51	1.39	1.61
-20	(- 4)	813	205	238	133	0.63	2.55	6.12	1.54	1.79
-15	(+ 5)	1040	262	305	155	0.74	3.28	6.73	1.70	1.97
-10	(+14)	1303	328	382	179	0.85	4.11	7.31	1.84	2.14

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		