

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			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	115	0.57	2.30	6.37	1.61	1.87

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)	431	109	126	75	0.39	1.35	5.72	1.44	1.68
-30 (-22)	574	145	168	87	0.44	1.80	6.59	1.66	1.93
-25 (-13)	742	187	218	100	0.49	2.33	7.46	1.88	2.18
-20 (- 4)	943	238	276	113	0.56	2.96	8.34	2.10	2.44
-15 (+ 5)	1183	298	347	127	0.62	3.72	9.27	2.34	2.72
-10 (+14)	1466	370	430	142	0.68	4.63	10.29	2.59	3.01

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)	398	100	117	76	0.39	1.25	5.23	1.32	1.53
-30 (-22)	541	136	158	90	0.45	1.69	6.02	1.52	1.76
-25 (-13)	707	178	207	104	0.52	2.22	6.78	1.71	1.99
-20 (- 4)	903	228	265	120	0.59	2.84	7.55	1.90	2.21
-15 (+ 5)	1135	286	333	136	0.66	3.57	8.35	2.10	2.45
-10 (+14)	1409	355	413	153	0.73	4.45	9.22	2.32	2.70

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)	364	92	107	77	0.40	1.14	4.73	1.19	1.39
-30 (-22)	506	128	148	93	0.46	1.59	5.45	1.37	1.60
-25 (-13)	670	169	196	109	0.54	2.10	6.12	1.54	1.79
-20 (- 4)	862	217	252	127	0.62	2.71	6.79	1.71	1.99
-15 (+ 5)	1087	274	318	145	0.70	3.42	7.47	1.88	2.19
-10 (+14)	1352	341	396	165	0.79	4.27	8.20	2.07	2.40

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)	323	81	95	77	0.39	1.01	4.20	1.06	1.23
-30	(-22)	465	117	136	95	0.47	1.46	4.85	1.22	1.42
-25	(-13)	626	158	184	115	0.55	1.97	5.46	1.38	1.60
-20	(- 4)	813	205	238	135	0.64	2.56	6.03	1.52	1.77
-15	(+ 5)	1032	260	302	156	0.74	3.25	6.61	1.67	1.94
-10	(+14)	1288	324	377	178	0.84	4.06	7.22	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	6.1 +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		