

COMPRESSOR DEFINITION

Designation	EM X80CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701AA98

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/cm²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/7	[hp]
2 Displacement	12.21	[cm³] (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)	7.9	[kg] (17.42 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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)/4(350)	[µF(VAC minimum)]
5 Motor protection	CP4TMC288K61A5	
6 Start winding resistance	18.65	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.71	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.47	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.26	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.52	[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]
726	183	213	123	0.60	2.28	5.90	1.49	1.73

E - PERFORMANCE - CURVES

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	83	0.40	1.23	4.74	1.19	1.39
-30	(-22)	529	133	155	97	0.46	1.66	5.46	1.38	1.60
-25	(-13)	702	177	206	113	0.53	2.20	6.24	1.57	1.83
-20	(- 4)	910	229	267	129	0.61	2.86	7.07	1.78	2.07
-15	(+ 5)	1155	291	339	146	0.69	3.64	7.93	2.00	2.32
-10	(+14)	1438	362	421	163	0.77	4.54	8.80	2.22	2.58

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)	361	91	106	84	0.41	1.13	4.27	1.08	1.25
-30	(-22)	493	124	145	100	0.49	1.55	4.92	1.24	1.44
-25	(-13)	660	166	193	117	0.57	2.07	5.61	1.41	1.64
-20	(- 4)	861	217	252	136	0.66	2.71	6.34	1.60	1.86
-15	(+ 5)	1099	277	322	155	0.74	3.46	7.09	1.79	2.08
-10	(+14)	1375	346	403	176	0.84	4.34	7.84	1.98	2.30

TEST CONDITIONS:		ASHRAE32-NOFAN				(Condensing temperature 65°C (+149°F))				
@220V50Hz		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	326	82	95	82	0.40	1.02	3.98	1.00	1.17
-30	(-22)	452	114	132	100	0.48	1.42	4.54	1.14	1.33
-25	(-13)	612	154	179	119	0.58	1.92	5.14	1.30	1.51
-20	(- 4)	807	203	236	140	0.67	2.54	5.76	1.45	1.69
-15	(+ 5)	1037	261	304	162	0.78	3.27	6.39	1.61	1.87
-10	(+14)	1305	329	382	186	0.88	4.12	7.01	1.77	2.05

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	5.1 +0.10/+0.00	[mm]	(0.201" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 42° 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		