

COMPRESSOR DEFINITION

Designation	EM X80CLT
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701AA89

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 254 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 254 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	1/7	[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)	7.9	[kg] (17.42 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	PTC	
2.1 Starting device	MI2021/V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(350)/4(350)	[µF(VAC minimum)]
5 Motor protection	AE19BU	
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)	1.24	[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	125	0.60	2.28	5.81	1.46	1.70

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	85	0.40	1.23	4.63	1.17	1.36
-30 (-22)	529	133	155	99	0.46	1.66	5.35	1.35	1.57
-25 (-13)	702	177	206	115	0.53	2.20	6.13	1.54	1.80
-20 (- 4)	910	229	267	131	0.61	2.86	6.96	1.75	2.04
-15 (+ 5)	1155	291	339	148	0.69	3.64	7.82	1.97	2.29
-10 (+14)	1438	362	421	165	0.77	4.54	8.69	2.19	2.55

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	86	0.41	1.13	4.18	1.05	1.22
-30 (-22)	493	124	145	102	0.49	1.55	4.82	1.21	1.41
-25 (-13)	660	166	193	119	0.57	2.07	5.52	1.39	1.62
-20 (- 4)	861	217	252	138	0.66	2.71	6.25	1.58	1.83
-15 (+ 5)	1099	277	322	157	0.74	3.46	7.00	1.76	2.05
-10 (+14)	1375	346	403	178	0.84	4.34	7.75	1.95	2.27

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)	326	82	95	84	0.40	1.02	3.89	0.98	1.14
-30 (-22)	452	114	132	102	0.48	1.42	4.45	1.12	1.30
-25 (-13)	612	154	179	121	0.58	1.92	5.06	1.27	1.48
-20 (- 4)	807	203	236	142	0.67	2.54	5.68	1.43	1.67
-15 (+ 5)	1037	261	304	164	0.78	3.27	6.31	1.59	1.85
-10 (+14)	1305	329	382	188	0.88	4.12	6.93	1.75	2.03

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
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		