

COMPRESSOR DEFINITION

Designation	EM X70CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	700AA98

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	11.14	[cm ³] (0.680 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	21.000	
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)	7.4	[kg] (16.31 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(350)/5(350)	[µF(VAC minimum)]
5 Motor protection	AE37FQ	
6 Start winding resistance	22.47	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.35	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	6.01	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.05	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.25	[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]
652	164	191	110	0.52	2.05	5.93	1.49	1.74

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]
-35	(-31)	400	101	117	72	0.38	1.25	5.54	1.40	1.62
-30	(-22)	520	131	152	78	0.43	1.63	6.60	1.66	1.93
-25	(-13)	673	170	197	89	0.48	2.11	7.51	1.89	2.20
-20	(- 4)	860	217	252	103	0.53	2.70	8.35	2.10	2.45
-15	(+ 5)	1082	273	317	118	0.59	3.40	9.19	2.32	2.69
-10	(+14)	1340	338	393	133	0.65	4.23	10.10	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]
-35	(-31)	360	91	106	77	0.39	1.13	4.71	1.19	1.38
-30	(-22)	479	121	140	85	0.44	1.50	5.66	1.43	1.66
-25	(-13)	630	159	185	97	0.50	1.98	6.46	1.63	1.89
-20	(- 4)	815	205	239	113	0.57	2.56	7.19	1.81	2.11
-15	(+ 5)	1036	261	303	131	0.64	3.26	7.92	2.00	2.32
-10	(+14)	1293	326	379	148	0.72	4.08	8.73	2.20	2.56

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]
-35	(-31)	330	83	97	79	0.40	1.03	4.17	1.05	1.22
-30	(-22)	446	112	131	89	0.46	1.40	5.00	1.26	1.47
-25	(-13)	594	150	174	104	0.53	1.86	5.69	1.43	1.67
-20	(- 4)	776	195	227	123	0.61	2.44	6.31	1.59	1.85
-15	(+ 5)	993	250	291	143	0.69	3.13	6.93	1.75	2.03
-10	(+14)	1247	314	365	163	0.78	3.93	7.63	1.92	2.24

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)	304	77	89	80	0.40	0.95	3.79	0.95	1.11
-30	(-22)	414	104	121	93	0.47	1.30	4.51	1.14	1.32
-25	(-13)	558	140	163	110	0.55	1.75	5.09	1.28	1.49
-20	(- 4)	735	185	215	131	0.64	2.31	5.60	1.41	1.64
-15	(+ 5)	947	239	277	154	0.73	2.98	6.11	1.54	1.79
-10	(+14)	1196	301	350	178	0.83	3.77	6.70	1.69	1.96

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		