

COMPRESSOR DEFINITION

Designation	EM UL70CLP
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513304146

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220 / 60	[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	RSIR		
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 242 V
8.2 LBP (43°C Ambient temperature)	Static	-	198 to 242 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	1/5	[hp]
2 Displacement	10.61	[cm ³] (0.647 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	20.000	
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)	7.1	[kg] (15.65 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C1/QPS2-A22MG1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	DRB26R61A2	
6 Start winding resistance	24.19	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.28	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	6.90	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.19	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.38	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - TUV - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
734	185	215	141	0.96	2.30	5.19	1.31	1.52

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			ASHRAE32 Static		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	436	110	128	96	0.85	1.37	4.54	1.15	1.33
-30	(-22)	578	146	169	109	0.88	1.81	5.30	1.34	1.55
-25	(-13)	751	189	220	123	0.91	2.36	6.13	1.54	1.80
-20	(- 4)	960	242	281	137	0.95	3.02	7.03	1.77	2.06
-15	(+ 5)	1210	305	354	152	1.00	3.81	7.99	2.01	2.34
-10	(+14)	1505	379	441	167	1.05	4.75	9.01	2.27	2.64

TEST CONDITIONS: @220V60Hz			ASHRAE32 Static		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	403	102	118	99	0.85	1.26	4.08	1.03	1.19
-30	(-22)	543	137	159	114	0.88	1.70	4.76	1.20	1.39
-25	(-13)	712	180	209	130	0.93	2.23	5.48	1.38	1.61
-20	(- 4)	917	231	269	146	0.98	2.88	6.26	1.58	1.83
-15	(+ 5)	1162	293	341	164	1.04	3.66	7.08	1.79	2.08
-10	(+14)	1453	366	426	183	1.11	4.58	7.95	2.00	2.33

TEST CONDITIONS: @220V60Hz			ASHRAE32 Static		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	369	93	108	100	0.85	1.16	3.69	0.93	1.08
-30	(-22)	505	127	148	117	0.89	1.58	4.30	1.08	1.26
-25	(-13)	670	169	196	135	0.94	2.10	4.95	1.25	1.45
-20	(- 4)	870	219	255	154	1.00	2.73	5.62	1.42	1.65
-15	(+ 5)	1109	279	325	175	1.08	3.49	6.32	1.59	1.85
-10	(+14)	1392	351	408	197	1.17	4.39	7.05	1.78	2.06

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	332	84	97	100	0.85	1.04	3.33	0.84	0.98
-30	(-22)	463	117	136	119	0.89	1.45	3.90	0.98	1.14
-25	(-13)	622	157	182	139	0.95	1.95	4.48	1.13	1.31
-20	(- 4)	815	205	239	161	1.03	2.56	5.07	1.28	1.48
-15	(+ 5)	1046	264	307	185	1.12	3.29	5.66	1.43	1.66
-10	(+14)	1321	333	387	211	1.22	4.17	6.26	1.58	1.84

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
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 parallel BP+24°to Back		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted parallel BP+45°to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		