

COMPRESSOR DEFINITION

Designation	EM SL100HLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513301028

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
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 255 V	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	8.41	[cm ³] (0.513 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	18.600	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.68	[kg] (16.93 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

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	8EA17C3/8EA17E61/8EA17E62/8EA17E63/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(450)	[µF(VAC minimum)]
5 Motor protection	4TM734KFBYY-53	
6 Start winding resistance	17.73	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	14.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.32	[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		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 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]
784	197	230	151	0.77	4.45	5.19	1.31	1.52

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 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)	487	123	143	103	0.58	2.76	4.71	1.19	1.38
-30 (-22)	637	160	187	119	0.64	3.61	5.39	1.36	1.58
-25 (-13)	840	212	246	136	0.71	4.77	6.19	1.56	1.81
-20 (- 4)	1098	277	322	156	0.79	6.25	7.07	1.78	2.07
-15 (+ 5)	1408	355	413	176	0.87	8.04	8.01	2.02	2.35
-10 (+14)	1769	446	518	197	0.96	10.14	8.99	2.27	2.63

TEST CONDITIONS: @220V50Hz		ASHRAE32 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)	428	108	125	103	0.58	2.42	4.14	1.04	1.21
-30 (-22)	574	145	168	121	0.65	3.25	4.77	1.20	1.40
-25 (-13)	775	195	227	141	0.73	4.40	5.49	1.38	1.61
-20 (- 4)	1029	259	301	163	0.82	5.85	6.27	1.58	1.84
-15 (+ 5)	1335	336	391	188	0.93	7.62	7.10	1.79	2.08
-10 (+14)	1693	427	496	214	1.04	9.70	7.93	2.00	2.32

TEST CONDITIONS: @220V50Hz		ASHRAE32 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)	373	94	109	102	0.59	2.11	3.69	0.93	1.08
-30 (-22)	513	129	150	121	0.65	2.91	4.27	1.08	1.25
-25 (-13)	707	178	207	143	0.74	4.01	4.92	1.24	1.44
-20 (- 4)	954	240	279	169	0.85	5.43	5.62	1.42	1.65
-15 (+ 5)	1253	316	367	198	0.97	7.16	6.33	1.59	1.85
-10 (+14)	1604	404	470	228	1.10	9.19	7.03	1.77	2.06

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 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)	324	82	95	98	0.59	1.83	3.30	0.83	0.97
-30	(-22)	453	114	133	119	0.66	2.57	3.85	0.97	1.13
-25	(-13)	636	160	187	144	0.75	3.61	4.44	1.12	1.30
-20	(- 4)	873	220	256	173	0.87	4.97	5.05	1.27	1.48
-15	(+ 5)	1163	293	341	206	1.00	6.63	5.66	1.43	1.66
-10	(+14)	1503	379	440	241	1.16	8.61	6.25	1.57	1.83

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
2 Tray holder	Yes		
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 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		