

COMPRESSOR DEFINITION

Designation	EM R130HLC
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513400006

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 60	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°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)	-	-	-
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/cm²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3+	[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	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.96	[kg] (17.55 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 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C3/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(350)	[µF(VAC minimum)]
5 Motor protection	4TM757KDBYY-53	
6 Start winding resistance	24.25	[Ωat 25°C (77°F)] +/- 8%
7 Run winding resistance	5.25	[Ωat 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	15.12	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.80	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			ASHRAELBP32 Fan		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]
1282	323	376	262	1.60	7.28	4.89	1.23	1.43

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan				(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)	736	186	216	180	1.39	4.16	4.10	1.03	1.20
-30	(-22)	994	250	291	203	1.41	5.64	4.92	1.24	1.44
-25	(-13)	1308	330	383	229	1.46	7.43	5.71	1.44	1.67
-20	(- 4)	1686	425	494	261	1.56	9.59	6.48	1.63	1.90
-15	(+ 5)	2133	538	625	296	1.69	12.17	7.22	1.82	2.11
-10	(+14)	2658	670	779	335	1.85	15.22	7.94	2.00	2.33
-5	(+23)	3266	823	957	378	2.03	18.79	8.63	2.18	2.53
0	(+32)	3965	999	1162	425	2.23	22.92	9.31	2.35	2.73

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan				(Condensing temperature 45°C (+113°F))				
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)	696	175	204	183	1.38	3.94	3.77	0.95	1.11
-30	(-22)	948	239	278	209	1.42	5.37	4.52	1.14	1.32
-25	(-13)	1257	317	368	239	1.50	7.14	5.24	1.32	1.54
-20	(- 4)	1631	411	478	274	1.61	9.28	5.95	1.50	1.74
-15	(+ 5)	2077	523	609	313	1.76	11.86	6.64	1.67	1.95
-10	(+14)	2602	656	762	356	1.93	14.90	7.32	1.84	2.14
-5	(+23)	3212	809	941	403	2.13	18.48	7.98	2.01	2.34
0	(+32)	3914	986	1147	453	2.34	22.63	8.64	2.18	2.53

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan				(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)	613	154	180	181	1.36	3.46	3.41	0.86	1.00
-30	(-22)	853	215	250	210	1.42	4.83	4.08	1.03	1.19
-25	(-13)	1152	290	338	244	1.53	6.54	4.73	1.19	1.39
-20	(- 4)	1518	383	445	282	1.66	8.64	5.38	1.36	1.58
-15	(+ 5)	1958	493	574	325	1.82	11.17	6.02	1.52	1.76
-10	(+14)	2477	624	726	372	2.01	14.19	6.65	1.68	1.95
-5	(+23)	3084	777	904	423	2.22	17.74	7.29	1.84	2.13
0	(+32)	3785	954	1109	478	2.44	21.88	7.92	1.99	2.32

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan			(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)	558	141	164	180	1.36	3.16	3.10	0.78	0.91
-30	(-22)	782	197	229	213	1.45	4.43	3.68	0.93	1.08
-25	(-13)	1066	269	313	250	1.57	6.06	4.26	1.07	1.25
-20	(- 4)	1419	358	416	293	1.73	8.08	4.85	1.22	1.42
-15	(+ 5)	1847	466	541	340	1.91	10.54	5.43	1.37	1.59
-10	(+14)	2357	594	691	391	2.11	13.50	6.02	1.52	1.76
-5	(+23)	2956	745	866	446	2.33	17.00	6.62	1.67	1.94
0	(+32)	3650	920	1070	506	2.56	21.10	7.22	1.82	2.11

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal AMEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		

