

COMPRESSOR DEFINITION

Designation	EM R130HLC
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513400007

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115-127 / 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	CSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expantion 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/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	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)	7.98	[kg] (17.59 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213515080	
3 Start capacitor	124-149(180)	[μF(VAC minimum)]
4 Run capacitor	20(180)	[μF(VAC minimum)]
5 Motor protection	4TM771RFBZZ-53	
6 Start winding resistance	5.93	[Ωat 25°C (77°F)] +/- 8%
7 Run winding resistance	1.77	[Ωat 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	27.52	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.29	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]	
1235	311	362	245	2.47	7.02	5.05	1.27	1.48	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	718	181	210	177	2.53	4.06	4.07	1.03	1.19
-30	(-22)	977	246	286	198	2.48	5.54	4.93	1.24	1.44
-25	(-13)	1289	325	378	224	2.59	7.32	5.74	1.45	1.68
-20	(- 4)	1662	419	487	255	2.79	9.46	6.52	1.64	1.91
-15	(+ 5)	2102	530	616	290	3.07	12.00	7.26	1.83	2.13
-10	(+14)	2615	659	766	329	3.36	14.98	7.97	2.01	2.34
-5	(+23)	3207	808	940	371	3.64	18.45	8.66	2.18	2.54
0	(+32)	3886	979	1139	416	3.85	22.47	9.32	2.35	2.73

TEST CONDITIONS: @115V60Hz			ASHRAE32 Fan		(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)	678	171	199	180	2.56	3.84	3.75	0.94	1.10
-30	(-22)	927	234	272	204	2.50	5.26	4.51	1.14	1.32
-25	(-13)	1233	311	361	234	2.59	7.00	5.25	1.32	1.54
-20	(- 4)	1601	403	469	268	2.81	9.11	5.96	1.50	1.75
-15	(+ 5)	2038	514	597	306	3.12	11.63	6.65	1.67	1.95
-10	(+14)	2551	643	748	349	3.46	14.61	7.32	1.84	2.14
-5	(+23)	3147	793	922	395	3.81	18.10	7.98	2.01	2.34
0	(+32)	3831	965	1123	444	4.12	22.15	8.62	2.17	2.53

TEST CONDITIONS: @115V60Hz			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)	602	152	176	178	2.59	3.40	3.41	0.86	1.00
-30	(-22)	837	211	245	206	2.49	4.74	4.09	1.03	1.20
-25	(-13)	1130	285	331	239	2.58	6.42	4.75	1.20	1.39
-20	(- 4)	1489	375	436	277	2.82	8.47	5.39	1.36	1.58
-15	(+ 5)	1920	484	562	319	3.15	10.95	6.03	1.52	1.77
-10	(+14)	2429	612	712	365	3.55	13.91	6.66	1.68	1.95
-5	(+23)	3023	762	886	415	3.96	17.39	7.28	1.84	2.13
0	(+32)	3709	935	1087	469	4.36	21.44	7.91	1.99	2.32

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	548	138	161	176	2.63	3.10	3.10	0.78	0.91
-30	(-22)	764	193	224	208	2.51	4.33	3.68	0.93	1.08
-25	(-13)	1041	262	305	245	2.58	5.91	4.26	1.07	1.25
-20	(- 4)	1386	349	406	286	2.83	7.89	4.84	1.22	1.42
-15	(+ 5)	1806	455	529	333	3.19	10.31	5.42	1.37	1.59
-10	(+14)	2307	581	676	383	3.63	13.21	6.01	1.51	1.76
-5	(+23)	2895	730	848	438	4.12	16.66	6.61	1.67	1.94
0	(+32)	3578	902	1048	496	4.60	20.68	7.22	1.82	2.12

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		

