

### COMPRESSOR DEFINITION

Designation	EM 55HHR
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513307530

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50-60	[ V / Hz ]	
4 Application type	High Back Pressure		
4.1 Evaporating temperature range	-5°C to 15°C	(23°F to 59°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)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	Fan	198 to 255 V	198 to 242 V
8.4 HBP (43°C Ambient temperature)	Fan	198 to 255 V	198 to 242 V
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	4.60	[cm <sup>3</sup> ] (0.281 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	13.300	
3 Lubricant charge	160	[ml] (5.41 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.58	[kg] (16.71 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514130	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM734KDBYY-53	
6 Start winding resistance	45.15	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.25	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	8.62/8.41	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.45/1.05	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.32/1.15	[A] - Measured according to UL 984
11 Approval boards certification	CE - ISI - TUV - UKCA - UL - VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAEHBP32 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]	
1820	459	533	198	1.25		9.19	2.32	2.69	

TEST CONDITIONS: @220V60Hz			ASHRAEHBP32 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]	
2150	542	630	242	1.35		8.88	2.24	2.60	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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]
-5	(+23)	1175	296	344	155	1.12	6.76	7.58	1.91	2.22
0	(+32)	1418	357	415	165	1.13	8.19	8.61	2.17	2.52
+5	(+41)	1719	433	504	175	1.16	10.00	9.81	2.47	2.87
+10	(+50)	2078	524	609	186	1.19	12.18	11.17	2.81	3.27
+15	(+59)	2496	629	731	197	1.24	14.74	12.68	3.20	3.72

TEST CONDITIONS: @220V50Hz		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]
-5	(+23)	1112	280	326	166	1.14	6.40	6.71	1.69	1.97
0	(+32)	1363	343	399	179	1.17	7.87	7.61	1.92	2.23
+5	(+41)	1656	417	485	193	1.21	9.63	8.59	2.17	2.52
+10	(+50)	1991	502	583	206	1.26	11.67	9.67	2.44	2.83
+15	(+59)	2368	597	694	219	1.31	13.98	10.83	2.73	3.17

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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]
-5 (+23)	1017	256	298	175	1.17	5.85	5.82	1.47	1.71	
0 (+32)	1275	321	374	193	1.22	7.36	6.60	1.66	1.93	
+5 (+41)	1558	393	457	211	1.28	9.06	7.40	1.86	2.17	
+10 (+50)	1867	470	547	227	1.33	10.94	8.21	2.07	2.41	
+15 (+59)	2201	555	645	243	1.39	13.00	9.05	2.28	2.65	

TEST CONDITIONS: @220V60Hz		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]
-5 (+23)	1373	346	402	181	1.09	7.90	7.60	1.91	2.23	
0 (+32)	1681	423	492	195	1.14	9.71	8.63	2.18	2.53	
+5 (+41)	2051	517	601	209	1.19	11.93	9.81	2.47	2.88	
+10 (+50)	2486	626	728	223	1.24	14.56	11.13	2.80	3.26	
+15 (+59)	2983	752	874	237	1.30	17.62	12.59	3.17	3.69	

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]
-5 (+23)	1287	324	377	192	1.13	7.40	6.73	1.70	1.97	
0 (+32)	1607	405	471	211	1.21	9.29	7.59	1.91	2.22	
+5 (+41)	1975	498	579	231	1.28	11.49	8.50	2.14	2.49	
+10 (+50)	2392	603	701	252	1.37	14.01	9.48	2.39	2.78	
+15 (+59)	2856	720	837	272	1.45	16.86	10.50	2.65	3.08	

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]
-5 (+23)	1230	310	361	204	1.17	7.08	6.01	1.51	1.76	
0 (+32)	1517	382	445	230	1.28	8.77	6.63	1.67	1.94	
+5 (+41)	1837	463	538	255	1.39	10.68	7.22	1.82	2.11	
+10 (+50)	2190	552	642	282	1.49	12.83	7.77	1.96	2.28	
+15 (+59)	2575	649	755	310	1.60	15.21	8.31	2.09	2.43	

### 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	Slanted		
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		