

COMPRESSOR DEFINITION

Designation	EM 55HHR
Nominal Voltage/Frequency	220-240 V 50-60 Hz
Engineering Number	513307427

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	CSIR		
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/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	1/6	[hp]
2 Displacement	4.60	[cm³] (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/cm²] (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	213515004	
3 Start capacitor	88-108(250)	[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)	9.31/8.83	[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 - 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%		
	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-5 (+23)	1175	296	344		0.00	6.76	0.00	0.00	0.00
0 (+32)	1418	357	415		0.00	8.19	0.00	0.00	0.00
+5 (+41)	1719	433	504		0.00	10.00	0.00	0.00	0.00
+10 (+50)	2078	524	609		0.00	12.18	0.00	0.00	0.00
+15 (+59)	2496	629	731		0.00	14.74	0.00	0.00	0.00

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%		
	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-5 (+23)	1112	280	326		0.00	6.40	0.00	0.00	0.00
0 (+32)	1363	343	399		0.00	7.87	0.00	0.00	0.00
+5 (+41)	1656	417	485		0.00	9.63	0.00	0.00	0.00
+10 (+50)	1991	502	583		0.00	11.67	0.00	0.00	0.00
+15 (+59)	2368	597	694		0.00	13.98	0.00	0.00	0.00

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@220V50Hz		Fan								
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]
-5	(+23)	1017	256	298		0.00	5.85	0.00	0.00	0.00
0	(+32)	1275	321	374		0.00	7.36	0.00	0.00	0.00
+5	(+41)	1558	393	457		0.00	9.06	0.00	0.00	0.00
+10	(+50)	1867	470	547		0.00	10.94	0.00	0.00	0.00
+15	(+59)	2201	555	645		0.00	13.00	0.00	0.00	0.00

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@220V60Hz		Fan								
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]
-5	(+23)	1373	346	402		0.00	7.90	0.00	0.00	0.00
0	(+32)	1681	423	492		0.00	9.71	0.00	0.00	0.00
+5	(+41)	2051	517	601		0.00	11.93	0.00	0.00	0.00
+10	(+50)	2486	626	728		0.00	14.56	0.00	0.00	0.00
+15	(+59)	2983	752	874		0.00	17.62	0.00	0.00	0.00

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@220V60Hz		Fan								
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]
-5	(+23)	1287	324	377		0.00	7.40	0.00	0.00	0.00
0	(+32)	1607	405	471		0.00	9.29	0.00	0.00	0.00
+5	(+41)	1975	498	579		0.00	11.49	0.00	0.00	0.00
+10	(+50)	2392	603	701		0.00	14.01	0.00	0.00	0.00
+15	(+59)	2856	720	837		0.00	16.86	0.00	0.00	0.00

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@220V60Hz		Fan								
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]
-5	(+23)	1230	310	361		0.00	7.08	0.00	0.00	0.00
0	(+32)	1517	382	445		0.00	8.77	0.00	0.00	0.00
+5	(+41)	1837	463	538		0.00	10.68	0.00	0.00	0.00
+10	(+50)	2190	552	642		0.00	12.83	0.00	0.00	0.00
+15	(+59)	2575	649	755		0.00	15.21	0.00	0.00	0.00

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal 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	Straight		
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		
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		