COMPRESSOR DEFINITION

Designation	**EM 65HHR**
Nominal Voltage/Frequency	**220 V 50-60 Hz**
Engineering Number	**513307025**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 50-60	[V / Hz]	
4 Application type	Midium-High Back Pressure		
4.1 Evaporating temperature range	-10°C to 15°C	(14°F to 59°F)	
5 Motor type	RSIR-CSIR		
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 (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	Fan	187 to 242 V	187 to 242 V
8.4 HBP (43ºC Ambient temperature)	Fan	187 to 242 V	187 to 242 V
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm²] (230 psig)	/ ºC - ºF
9.2 Peak (gauge)	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/6+	[hp]
2 Displacement	5.54	[cm³] (0.338 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	16.000	
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)	7.2	[kg] (15.87 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 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514172	
3 Start capacitor	88-108(220)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM743KDBYY-53	
6 Start winding resistance	28.20	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	10.70	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	14.30/13.90	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	2.40/2.00	[A] - Measured according to UL 984
11 Approval boards certification	CCC - IMTRO - TUV - 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]
2200	554	645	270	1.91		8.15	2.05	2.39

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]
2615	659	766	308	1.77		8.49	2.14	2.49

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V50Hz**		**ASHRAE32** **Fan**			(Condensing temperature **45ºC (+113ºF))**					
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]
-10	**(+14)**	979	247	287	190	1.73	5.64	5.25	1.32	1.54
-5	**(+23)**	1328	335	389	211	1.78	7.64	6.30	1.59	1.85
0	**(+32)**	1703	429	499	229	1.82	9.84	7.41	1.87	2.17
+5	**(+41)**	2105	530	617	245	1.86	12.24	8.58	2.16	2.51
+10	**(+50)**	2533	638	742	259	1.89	14.84	9.80	2.47	2.87
+15	**(+59)**	2988	753	875	270	1.92	17.64	11.07	2.79	3.24

TEST CONDITIONS: **@220V50Hz**		**ASHRAE32** **Fan**			(Condensing temperature **55ºC (+131ºF))**					
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]
-10	**(+14)**	1036	261	304	207	1.81	5.97	5.00	1.26	1.46
-5	**(+23)**	1325	334	388	227	1.83	7.62	5.82	1.47	1.71
0	**(+32)**	1653	417	484	247	1.86	9.55	6.70	1.69	1.96
+5	**(+41)**	2021	509	592	264	1.89	11.75	7.65	1.93	2.24
+10	**(+50)**	2428	612	711	281	1.92	14.22	8.66	2.18	2.54
+15	**(+59)**	2875	724	842	295	1.96	16.97	9.73	2.45	2.85

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@220V50Hz **Fan**

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]
-10	**(+14)**	988	249	290	219	1.82	5.69	4.49	1.13	1.32
-5	**(+23)**	1243	313	364	240	1.84	7.15	5.19	1.31	1.52
0	**(+32)**	1550	391	454	261	1.87	8.95	5.95	1.50	1.74
+5	**(+41)**	1910	481	560	281	1.92	11.10	6.78	1.71	1.99
+10	**(+50)**	2322	585	680	302	1.98	13.61	7.69	1.94	2.25
+15	**(+59)**	2788	702	817	322	2.06	16.46	8.66	2.18	2.54

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V60Hz **Fan**

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]
-10	**(+14)**	1327	334	389	201	1.43	7.64	6.55	1.65	1.92
-5	**(+23)**	1671	421	490	225	1.49	9.61	7.41	1.87	2.17
0	**(+32)**	2065	520	605	249	1.56	11.93	8.31	2.09	2.44
+5	**(+41)**	2508	632	735	271	1.63	14.58	9.26	2.33	2.71
+10	**(+50)**	3000	756	879	293	1.72	17.58	10.24	2.58	3.00
+15	**(+59)**	3541	892	1038	314	1.82	20.91	11.26	2.84	3.30

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V60Hz **Fan**

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]
-10	**(+14)**	1299	327	381	221	1.48	7.48	5.85	1.47	1.71
-5	**(+23)**	1613	406	473	245	1.55	9.28	6.58	1.66	1.93
0	**(+32)**	1981	499	581	271	1.63	11.44	7.32	1.85	2.15
+5	**(+41)**	2405	606	705	297	1.72	13.98	8.08	2.04	2.37
+10	**(+50)**	2884	727	845	325	1.83	16.90	8.86	2.23	2.60
+15	**(+59)**	3418	861	1001	354	1.94	20.18	9.65	2.43	2.83

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@220V60Hz **Fan**

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]
-10	**(+14)**	1232	310	361	246	1.49	7.09	4.95	1.25	1.45
-5	**(+23)**	1526	385	447	268	1.59	8.78	5.69	1.43	1.67
0	**(+32)**	1882	474	551	293	1.70	10.87	6.42	1.62	1.88
+5	**(+41)**	2298	579	673	321	1.82	13.36	7.15	1.80	2.09
+10	**(+50)**	2774	699	813	352	1.96	16.25	7.86	1.98	2.30
+15	**(+59)**	3311	834	970	386	2.11	19.55	8.57	2.16	2.51

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	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		