COMPRESSOR DEFINITION

Designation	**EM R80HLR**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513400000**

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 (Plus) Back Pressure		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°F)	
5 Motor type	RSIR		
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)	Static	-	103 to 140 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm²] (202 psig)	/ ºC - ºF
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4+	[hp]
2 Displacement	6.60	[cm³] (0.403 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	16.600	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.44	[kg] (16.40 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514083	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM762NFBZZ-53	
6 Start winding resistance	8.12	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	3.61	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	24.35	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.87	[A] - Measured according to UL 984
11 Approval boards certification	IMTRO - TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@127V60Hz**			**ASHRAELBP32 Static**		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]
779	196	228	150	1.96	4.43	5.21	1.31	1.53

TEST CONDITIONS: **@127V60Hz**			**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]
808	204	237	150	1.97	4.59	5.40	1.36	1.58

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@127V60Hz**		**ASHRAE32 Static**			(Condensing temperature **35ºC (+95ºF))**					
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)**	458	115	134	101	1.78	2.59	4.52	1.14	1.32
-30	**(-22)**	616	155	181	116	1.82	3.49	5.34	1.35	1.56
-25	**(-13)**	812	205	238	131	1.88	4.61	6.22	1.57	1.82
-20	**(- 4)**	1054	266	309	147	1.96	6.00	7.19	1.81	2.11
-15	**(+ 5)**	1350	340	396	164	2.05	7.71	8.26	2.08	2.42
-10	**(+14)**	1708	430	500	181	2.14	9.79	9.44	2.38	2.76
-5	**(+23)**	2135	538	626	199	2.24	12.28	10.74	2.71	3.15
0	**(+32)**	2640	665	774	217	2.33	15.25	12.19	3.07	3.57

TEST CONDITIONS: **@127V60Hz**		**ASHRAE32 Static**			(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]
-35	**(-31)**	409	103	120	103	1.80	2.31	3.96	1.00	1.16
-30	**(-22)**	567	143	166	120	1.84	3.21	4.73	1.19	1.39
-25	**(-13)**	759	191	222	137	1.91	4.31	5.52	1.39	1.62
-20	**(- 4)**	993	250	291	156	2.00	5.65	6.36	1.60	1.86
-15	**(+ 5)**	1279	322	375	176	2.11	7.30	7.25	1.83	2.12
-10	**(+14)**	1622	409	475	197	2.24	9.29	8.22	2.07	2.41
-5	**(+23)**	2032	512	595	220	2.37	11.69	9.27	2.34	2.72
0	**(+32)**	2516	634	737	243	2.50	14.54	10.42	2.63	3.05

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF)**)
@127V60Hz **Static**

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)**	360	91	105	105	1.82	2.03	3.43	0.86	1.01
-30	**(-22)**	517	130	151	123	1.86	2.93	4.19	1.05	1.23
-25	**(-13)**	705	178	207	143	1.93	4.00	4.93	1.24	1.44
-20	**(- 4)**	932	235	273	164	2.04	5.31	5.67	1.43	1.66
-15	**(+ 5)**	1207	304	354	188	2.17	6.89	6.43	1.62	1.88
-10	**(+14)**	1536	387	450	213	2.32	8.80	7.21	1.82	2.11
-5	**(+23)**	1928	486	565	240	2.49	11.09	8.05	2.03	2.36
0	**(+32)**	2392	603	701	269	2.67	13.82	8.94	2.25	2.62

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF)**)
@127V60Hz **Static**

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)**	310	78	91	107	1.84	1.76	2.90	0.73	0.85
-30	**(-22)**	467	118	137	126	1.88	2.65	3.68	0.93	1.08
-25	**(-13)**	651	164	191	148	1.96	3.70	4.40	1.11	1.29
-20	**(- 4)**	871	219	255	172	2.08	4.96	5.08	1.28	1.49
-15	**(+ 5)**	1134	286	332	198	2.23	6.47	5.74	1.45	1.68
-10	**(+14)**	1449	365	425	227	2.41	8.30	6.39	1.61	1.87
-5	**(+23)**	1824	460	534	259	2.61	10.49	7.04	1.77	2.06
0	**(+32)**	2266	571	664	292	2.83	13.09	7.72	1.94	2.26

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		