

### COMPRESSOR DEFINITION

Designation	EM R60HLC
Nominal Voltage/Frequency	200-230 V 50 Hz
Engineering Number	513300332

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200-230 / 50	[ V / Hz ]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSCR		
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)	Static	160 to 260 V	-
8.2 LBP (43°C Ambient temperature)	Static	160 to 260 V	-
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 <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	1/4	[hp]
2 Displacement	5.54	[cm <sup>3</sup> ] (0.338 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	16.000	
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)	7.4	[kg] (16.31 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	200-230V 50Hz 1 ~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	TSD-220V0.6	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(350)	[µF(VAC minimum)]
5 Motor protection	4TM232KFBYY-53	
6 Start winding resistance	[Ω at 25°C (77°F)] +/- 8%	
7 Run winding resistance	[Ω at 25°C (77°F)] +/- 8%	
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
597	150	175	105	0.51	3.39	5.66	1.43	1.66

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 Static		(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)	375	94	110	70	0.36	2.12	5.34	1.35	1.56
-30 (-22)	501	126	147	80	0.40	2.84	6.28	1.58	1.84
-25 (-13)	656	165	192	90	0.45	3.72	7.26	1.83	2.13
-20 (- 4)	840	212	246	101	0.50	4.78	8.29	2.09	2.43
-15 (+ 5)	1056	266	309	113	0.55	6.03	9.36	2.36	2.74
-10 (+14)	1303	328	382	125	0.60	7.46	10.48	2.64	3.07

TEST CONDITIONS: @220V50Hz			ASHRAE32 Static		(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)	353	89	103	72	0.37	2.00	4.92	1.24	1.44
-30 (-22)	476	120	140	83	0.42	2.70	5.74	1.45	1.68
-25 (-13)	629	159	184	95	0.47	3.57	6.59	1.66	1.93
-20 (- 4)	812	205	238	108	0.53	4.62	7.48	1.89	2.19
-15 (+ 5)	1028	259	301	122	0.59	5.87	8.41	2.12	2.46
-10 (+14)	1275	321	374	136	0.65	7.31	9.38	2.36	2.75

TEST CONDITIONS: @220V50Hz			ASHRAE32 Static		(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)	324	82	95	71	0.37	1.83	4.56	1.15	1.34
-30 (-22)	442	111	130	84	0.42	2.51	5.26	1.33	1.54
-25 (-13)	591	149	173	99	0.49	3.36	5.99	1.51	1.76
-20 (- 4)	772	195	226	114	0.55	4.39	6.75	1.70	1.98
-15 (+ 5)	985	248	289	130	0.63	5.62	7.55	1.90	2.21
-10 (+14)	1232	310	361	147	0.70	7.05	8.39	2.11	2.46

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static			(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)	278	70	81	66	0.34	1.57	4.21	1.06	1.23
-30	(-22)	390	98	114	82	0.41	2.21	4.80	1.21	1.41
-25	(-13)	533	134	156	99	0.49	3.03	5.41	1.36	1.59
-20	(- 4)	709	179	208	117	0.57	4.03	6.06	1.53	1.78
-15	(+ 5)	918	231	269	136	0.65	5.24	6.73	1.70	1.97
-10	(+14)	1161	293	340	156	0.74	6.65	7.44	1.87	2.18

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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	Slanted 40° up + 45° to Back		
3.2 DISCHARGE	4.9 +0.10/-0.05	[mm]	(0.193" +0.004"/-0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 42° up + 24° to Back		
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	Slanted 40° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		