

COMPRESSOR DEFINITION

Designation	EM 65HNR
Nominal Voltage/Frequency	220 V 50 Hz
Engineering Number	513307213

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 50	[V / Hz]	
4 Application type	Low-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°F)	
5 Motor type	RSIR/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)	Static	187 to 242 V	-
8.2 LBP (43°C Ambient temperature)	Static	187 to 242 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 ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/6+	[hp]
2 Displacement	5.54	[cm ³] (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)	7.66	[kg] (16.89 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514130/213515004	
3 Start capacitor	72-88(210)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM718RFBYY-53	
6 Start winding resistance	27.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	12.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.35	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

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]
520	131	152	130	1.05	2.95	4.00	1.01	1.17

E - PERFORMANCE - CURVES

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)	361	91	106	104	0.79	2.04	3.47	0.88	1.02
-30 (-22)	420	106	123	113	0.94	2.38	3.74	0.94	1.10
-25 (-13)	524	132	154	124	1.01	2.97	4.24	1.07	1.24
-20 (- 4)	672	169	197	137	1.06	3.82	4.90	1.23	1.44
-15 (+ 5)	863	218	253	151	1.08	4.93	5.69	1.43	1.67
-10 (+14)	1097	276	321	167	1.13	6.28	6.55	1.65	1.92
-5 (+23)	1371	346	402	185	1.20	7.89	7.43	1.87	2.18

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)	309	78	90	102	0.80	1.75	3.02	0.76	0.88
-30 (-22)	368	93	108	114	0.95	2.08	3.27	0.82	0.96
-25 (-13)	470	118	138	127	1.03	2.67	3.72	0.94	1.09
-20 (- 4)	615	155	180	142	1.08	3.50	4.31	1.09	1.26
-15 (+ 5)	801	202	235	159	1.11	4.57	5.01	1.26	1.47
-10 (+14)	1027	259	301	178	1.16	5.88	5.76	1.45	1.69
-5 (+23)	1293	326	379	198	1.24	7.44	6.51	1.64	1.91

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)	243	61	71	98	0.80	1.38	2.48	0.63	0.73
-30 (-22)	306	77	90	112	0.96	1.74	2.76	0.70	0.81
-25 (-13)	411	104	120	128	1.05	2.33	3.22	0.81	0.94
-20 (- 4)	556	140	163	146	1.11	3.17	3.80	0.96	1.11
-15 (+ 5)	741	187	217	166	1.15	4.23	4.46	1.12	1.31
-10 (+14)	965	243	283	188	1.21	5.53	5.15	1.30	1.51
-5 (+23)	1226	309	359	211	1.30	7.05	5.82	1.47	1.70

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 plated steel		
3.1.2 Shape	Straight		
3.2 DISCHARGE	5 +0.18/-0.06	[mm]	(0.197" +0.007"/-0.002")
3.2.1 Material	Copper plated steel		
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 plated steel		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		