

COMPRESSOR DEFINITION

Designation	EM 65HNR
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513307052

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 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)	Fan	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Fan	-	103 to 140 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)	7.62	[kg] (16.80 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514121/213515293	
3 Start capacitor	189-227(130)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CP4TMF231N61	
6 Start winding resistance	8.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	26.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.60	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	NOM - UL - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
650	164	190	168	2.65	3.69	3.88	0.98	1.14

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	521	131	153	154	2.48	2.95	3.40	0.86	1.00
-30 (-22)	574	145	168	159	2.49	3.25	3.62	0.91	1.06
-25 (-13)	685	173	201	169	2.54	3.89	4.05	1.02	1.19
-20 (- 4)	850	214	249	182	2.61	4.84	4.65	1.17	1.36
-15 (+ 5)	1063	268	312	199	2.70	6.07	5.35	1.35	1.57
-10 (+14)	1320	333	387	218	2.80	7.56	6.08	1.53	1.78
-5 (+23)	1615	407	473	237	2.91	9.29	6.81	1.72	2.00

TEST CONDITIONS: @115V60Hz			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%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	481	121	141	151	2.46	2.72	3.19	0.80	0.94
-30 (-22)	527	133	154	157	2.48	2.98	3.36	0.85	0.99
-25 (-13)	632	159	185	169	2.53	3.59	3.73	0.94	1.09
-20 (- 4)	792	200	232	186	2.62	4.51	4.24	1.07	1.24
-15 (+ 5)	1002	253	294	207	2.73	5.72	4.83	1.22	1.42
-10 (+14)	1257	317	368	231	2.87	7.20	5.45	1.37	1.60
-5 (+23)	1551	391	454	257	3.01	8.92	6.03	1.52	1.77

TEST CONDITIONS: @115V60Hz			ASHRAE32 Fan		(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)	436	110	128	151	2.45	2.47	2.89	0.73	0.85
-30 (-22)	476	120	140	157	2.47	2.70	3.06	0.77	0.90
-25 (-13)	578	146	169	170	2.53	3.28	3.41	0.86	1.00
-20 (- 4)	736	185	216	189	2.63	4.19	3.89	0.98	1.14
-15 (+ 5)	944	238	277	213	2.76	5.39	4.43	1.12	1.30
-10 (+14)	1199	302	351	241	2.93	6.87	4.98	1.26	1.46
-5 (+23)	1494	376	438	272	3.11	8.59	5.48	1.38	1.61

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		