

COMPRESSOR DEFINITION

Designation	EM I70HNR
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513307062

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115 / 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		
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 127 V
8.2 LBP (43°C Ambient temperature)	Fan	-	103 to 127 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	1/5	[hp]
2 Displacement	5.89	[cm ³] (0.359 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	17.000	
3 Lubricant charge	160	[ml] (5.41 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.68	[kg] (16.93 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 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514121	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	5TM762NFBZZ-53	
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)	28.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	3.60	[A] - Measured according to UL 984
11 Approval boards certification	UL	

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]
705	178	207	169	2.73	4.01	4.18	1.05	1.22

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)	406	102	119	137	2.64	2.30	2.96	0.75	0.87
-30 (-22)	548	138	161	146	2.66	3.11	3.76	0.95	1.10
-25 (-13)	722	182	212	159	2.70	4.10	4.54	1.14	1.33
-20 (- 4)	932	235	273	176	2.76	5.31	5.31	1.34	1.56
-15 (+ 5)	1180	297	346	194	2.83	6.73	6.08	1.53	1.78
-10 (+14)	1468	370	430	214	2.93	8.41	6.86	1.73	2.01
-5 (+23)	1798	453	527	234	3.06	10.35	7.68	1.93	2.25

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)	361	91	106	129	2.58	2.04	2.80	0.71	0.82
-30 (-22)	494	125	145	143	2.63	2.80	3.47	0.88	1.02
-25 (-13)	663	167	194	161	2.70	3.77	4.12	1.04	1.21
-20 (- 4)	870	219	255	182	2.79	4.95	4.77	1.20	1.40
-15 (+ 5)	1117	281	327	206	2.89	6.38	5.43	1.37	1.59
-10 (+14)	1406	354	412	230	3.03	8.06	6.11	1.54	1.79
-5 (+23)	1741	439	510	255	3.18	10.01	6.83	1.72	2.00

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)	310	78	91	125	2.53	1.75	2.48	0.63	0.73
-30 (-22)	434	109	127	142	2.61	2.46	3.08	0.78	0.90
-25 (-13)	596	150	175	163	2.70	3.38	3.66	0.92	1.07
-20 (- 4)	798	201	234	187	2.81	4.54	4.25	1.07	1.24
-15 (+ 5)	1042	263	305	214	2.94	5.95	4.85	1.22	1.42
-10 (+14)	1331	335	390	242	3.10	7.63	5.49	1.38	1.61
-5 (+23)	1668	420	489	270	3.28	9.59	6.18	1.56	1.81

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	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		