

COMPRESSOR DEFINITION

Designation	EM I70HER
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513307121

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 Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°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	-	98 to 135 V
8.2 LBP (43°C Ambient temperature)	Fan	-	98 to 135 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514067/213515250	
3 Start capacitor	270-324(115)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM762PFBZZ-53	
6 Start winding resistance	7.15	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.25	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	25.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.80	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - TUV - UKCA - 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	154	2.13	4.01	4.58	1.15	1.34

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)	375	95	110	110	1.92	2.12	3.40	0.86	1.00
-30 (-22)	536	135	157	126	1.99	3.04	4.22	1.06	1.24
-25 (-13)	707	178	207	143	2.07	4.02	4.96	1.25	1.45
-20 (- 4)	904	228	265	160	2.16	5.14	5.67	1.43	1.66
-15 (+ 5)	1138	287	334	178	2.28	6.50	6.39	1.61	1.87
-10 (+14)	1425	359	418	199	2.42	8.17	7.17	1.81	2.10

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)	340	86	100	109	1.94	1.93	3.12	0.79	0.91
-30 (-22)	485	122	142	127	2.01	2.75	3.78	0.95	1.11
-25 (-13)	643	162	188	147	2.10	3.65	4.38	1.10	1.28
-20 (- 4)	827	208	242	168	2.22	4.71	4.95	1.25	1.45
-15 (+ 5)	1052	265	308	190	2.36	6.00	5.54	1.40	1.62
-10 (+14)	1330	335	390	214	2.52	7.62	6.20	1.56	1.82

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)	299	75	88	110	1.91	1.69	2.74	0.69	0.80
-30 (-22)	436	110	128	130	2.00	2.47	3.33	0.84	0.98
-25 (-13)	586	148	172	152	2.11	3.33	3.87	0.97	1.13
-20 (- 4)	765	193	224	175	2.25	4.36	4.38	1.10	1.28
-15 (+ 5)	987	249	289	200	2.42	5.63	4.92	1.24	1.44
-10 (+14)	1263	318	370	227	2.62	7.24	5.54	1.40	1.62

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	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		