

COMPRESSOR DEFINITION

Designation	EM I50HNP
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513307179

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 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		
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	198 to 242 V	187 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 242 V	187 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	4.60	[cm ³] (0.281 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	13.300	
3 Lubricant charge	190	[ml] (6.42 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.51	[kg] (16.56 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 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MC1/8EA5B1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM232RFBYY-53	
6 Start winding resistance	18.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	5.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			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]
510	129	149	124	1.74	2.90	4.12	1.04	1.21

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			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)	276	70	81	90	0.77	1.56	3.07	0.77	0.90
-30 (-22)	385	97	113	103	0.81	2.18	3.74	0.94	1.10
-25 (-13)	519	131	152	118	0.84	2.95	4.42	1.11	1.30
-20 (- 4)	679	171	199	133	0.89	3.87	5.13	1.29	1.50
-15 (+ 5)	869	219	255	148	0.94	4.96	5.87	1.48	1.72
-10 (+14)	1090	275	319	164	0.99	6.25	6.65	1.68	1.95

TEST CONDITIONS: @220V60Hz			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)	223	56	65	88	0.76	1.26	2.55	0.64	0.75
-30 (-22)	331	83	97	103	0.80	1.88	3.22	0.81	0.94
-25 (-13)	463	117	136	120	0.85	2.63	3.88	0.98	1.14
-20 (- 4)	621	157	182	137	0.90	3.54	4.52	1.14	1.33
-15 (+ 5)	808	204	237	156	0.96	4.61	5.18	1.30	1.52
-10 (+14)	1025	258	300	175	1.03	5.87	5.85	1.47	1.71

TEST CONDITIONS: @220V60Hz			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)	164	41	48	81	0.75	0.93	2.01	0.51	0.59
-30 (-22)	269	68	79	99	0.79	1.53	2.70	0.68	0.79
-25 (-13)	398	100	117	119	0.85	2.26	3.35	0.84	0.98
-20 (- 4)	552	139	162	140	0.91	3.14	3.96	1.00	1.16
-15 (+ 5)	734	185	215	162	0.98	4.19	4.54	1.14	1.33
-10 (+14)	945	238	277	185	1.07	5.41	5.11	1.29	1.50

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		