

COMPRESSOR DEFINITION

Designation	EM I40HNP
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513303491

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 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	-	98 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	98 to 140 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	1/8	[hp]
2 Displacement	4.08	[cm ³] (0.249 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.400	
3 Lubricant charge	170	[ml] (5.75 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.55	[kg] (16.64 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	PTC	
2.1 Starting device	8EA14C1/8EA1B1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283ULBYY-53	
6 Start winding resistance	9.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.95	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	8.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.65	[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: @115V60Hz			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]
430	108	126	104	1.30	2.44	4.13	1.04	1.21

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	210	53	62	75	1.10	1.19	2.81	0.71	0.82
-30 (-22)	312	79	91	87	1.20	1.77	3.62	0.91	1.06
-25 (-13)	430	108	126	99	1.29	2.44	4.38	1.10	1.28
-20 (- 4)	570	144	167	111	1.37	3.24	5.13	1.29	1.50
-15 (+ 5)	740	186	217	124	1.47	4.22	5.91	1.49	1.73
-10 (+14)	948	239	278	139	1.57	5.43	6.77	1.71	1.98

TEST CONDITIONS: @115V60Hz			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)	149	37	44	69	1.11	0.84	2.13	0.54	0.63
-30 (-22)	261	66	76	85	1.20	1.48	3.07	0.77	0.90
-25 (-13)	383	97	112	100	1.29	2.18	3.88	0.98	1.14
-20 (- 4)	523	132	153	115	1.39	2.98	4.60	1.16	1.35
-15 (+ 5)	688	173	202	131	1.50	3.93	5.27	1.33	1.54
-10 (+14)	884	223	259	148	1.64	5.07	5.95	1.50	1.74

TEST CONDITIONS: @115V60Hz			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)	76	19	22	60	1.09	0.43	1.28	0.32	0.38
-30 (-22)	202	51	59	79	1.18	1.14	2.42	0.61	0.71
-25 (-13)	332	84	97	98	1.27	1.89	3.35	0.84	0.98
-20 (- 4)	475	120	139	116	1.39	2.70	4.11	1.04	1.20
-15 (+ 5)	637	161	187	135	1.53	3.64	4.75	1.20	1.39
-10 (+14)	826	208	242	156	1.70	4.73	5.32	1.34	1.56

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		