

COMPRESSOR DEFINITION

Designation	EM I40CNP
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513307586

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
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)	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)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	6.36	[cm ³] (0.388 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	170	[ml] (5.75 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO32	
4 Weight (with oil charge)	7.64	[kg] (16.84 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	8EA21C1/8EA3B1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283RFBYY-53	
6 Start winding resistance	5.45	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	9.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.00	[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]	
410	103	120	101	1.41	1.29	4.05	1.02	1.19	

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)	228	58	67	78	1.31	0.71	2.91	0.73	0.85
-30	(-22)	306	77	90	87	1.35	0.96	3.53	0.89	1.03
-25	(-13)	404	102	118	96	1.39	1.27	4.23	1.06	1.24
-20	(- 4)	526	133	154	105	1.45	1.65	5.00	1.26	1.46
-15	(+ 5)	675	170	198	115	1.51	2.13	5.83	1.47	1.71
-10	(+14)	853	215	250	127	1.58	2.69	6.73	1.70	1.97
-5	(+23)	1062	268	311	139	1.66	3.36	7.67	1.93	2.25

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)	197	50	58	78	1.32	0.62	2.54	0.64	0.75
-30	(-22)	273	69	80	88	1.35	0.86	3.14	0.79	0.92
-25	(-13)	369	93	108	98	1.40	1.16	3.79	0.95	1.11
-20	(- 4)	488	123	143	109	1.47	1.53	4.49	1.13	1.32
-15	(+ 5)	632	159	185	121	1.54	1.99	5.22	1.32	1.53
-10	(+14)	804	203	236	134	1.63	2.54	5.99	1.51	1.76
-5	(+23)	1006	254	295	148	1.73	3.18	6.77	1.71	1.99

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)	157	40	46	76	1.30	0.49	2.06	0.52	0.60
-30	(-22)	236	59	69	87	1.34	0.74	2.71	0.68	0.79
-25	(-13)	333	84	98	98	1.40	1.05	3.38	0.85	0.99
-20	(- 4)	453	114	133	111	1.48	1.42	4.08	1.03	1.19
-15	(+ 5)	596	150	175	125	1.56	1.88	4.78	1.21	1.40
-10	(+14)	766	193	224	140	1.67	2.42	5.49	1.38	1.61
-5	(+23)	965	243	283	156	1.78	3.05	6.19	1.56	1.81

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.1.1 Material	Copper plated steel		
3.1.2 Shape	Straight		
3.2 DISCHARGE	5 +0.18/-0.06	[mm]	(0.197" +0.007"/-0.002")
3.2.1 Material	Copper plated steel		
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 plated steel		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		