COMPRESSOR DEFINITION

Designation	**EM I40HNR**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513303760**

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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	-	98 to 140 V
8.2 LBP (43ºC Ambient temperature)	Static	-	98 to 140 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm²] (230 psig)	/ ºC - ºF
9.2 Peak (gauge)	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/10	[hp]
2 Displacement	3.77	[cm³] (0.230 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	13.300	
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)	7.12	[kg] (15.70 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (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	213514075	
3 Start capacitor	88-108(115)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283RFBYY-53	
6 Start winding resistance	18.75	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	6.25	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	11.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.55	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UCIEE - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ASHRAELBP32**			Evaporating temperature		**-23.3°C (-9.94°F)**
@115V60Hz			**Static**			(Condensing temperature		**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]
375	95	110	90	1.21	2.13	4.17	1.05	1.22

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **45ºC (+113ºF))**			
@115V60Hz		**Static**								
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)**	194	49	57	64	1.08	1.10	3.05	0.77	0.89
-30	**(-22)**	275	69	81	75	1.13	1.56	3.69	0.93	1.08
-25	**(-13)**	384	97	113	87	1.20	2.18	4.42	1.11	1.30
-20	**(- 4)**	519	131	152	99	1.27	2.95	5.22	1.32	1.53
-15	**(+ 5)**	678	171	199	112	1.35	3.87	6.07	1.53	1.78
-10	**(+14)**	862	217	253	124	1.43	4.94	6.95	1.75	2.04

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **55ºC (+131ºF))**			
@115V60Hz		**Static**								
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)**	128	32	38	59	1.06	0.73	2.18	0.55	0.64
-30	**(-22)**	210	53	61	72	1.12	1.19	2.91	0.73	0.85
-25	**(-13)**	318	80	93	86	1.19	1.81	3.66	0.92	1.07
-20	**(- 4)**	453	114	133	101	1.28	2.58	4.44	1.12	1.30
-15	**(+ 5)**	612	154	179	117	1.39	3.49	5.21	1.31	1.53
-10	**(+14)**	795	200	233	134	1.50	4.56	5.96	1.50	1.75

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **65ºC (+149ºF))**			
@115V60Hz		**Static**								
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)**	87	22	25	54	1.04	0.49	1.60	0.40	0.47
-30	**(-22)**	162	41	47	68	1.09	0.92	2.40	0.60	0.70
-25	**(-13)**	264	67	77	83	1.17	1.50	3.17	0.80	0.93
-20	**(- 4)**	392	99	115	101	1.27	2.23	3.90	0.98	1.14
-15	**(+ 5)**	545	137	160	119	1.40	3.11	4.58	1.15	1.34
-10	**(+14)**	722	182	212	140	1.55	4.14	5.20	1.31	1.52

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard 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	Slanted		
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		