COMPRESSOR DEFINITION

Designation	**EM IE40HER**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513306107**

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-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°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	-	103 to 140 V
8.2 LBP (43ºC Ambient temperature)	Static	-	103 to 140 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm²] (202 psig)	/ ºC - ºF
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/10	[hp]
2 Displacement	3.40	[cm³] (0.207 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	12.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.2	[kg] (15.87 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	213514075/213515268	
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	CE - TUV - UKCA - UL	

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]
400	101	117	89	1.21	2.27	4.50	1.13	1.32

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@115V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **35ºC (+95ºF))**

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)**	216	54	63	58	1.03	1.22	3.74	0.94	1.10
-30	**(-22)**	311	78	91	68	1.09	1.76	4.59	1.16	1.35
-25	**(-13)**	424	107	124	77	1.14	2.41	5.49	1.38	1.61
-20	**(- 4)**	558	141	164	86	1.19	3.18	6.45	1.63	1.89
-15	**(+ 5)**	716	180	210	95	1.25	4.09	7.50	1.89	2.20
-10	**(+14)**	901	227	264	104	1.30	5.16	8.64	2.18	2.53
-5	**(+23)**	1114	281	326	113	1.35	6.41	9.89	2.49	2.90

TEST CONDITIONS: **@115V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **45ºC (+113ºF))**

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)**	203	51	60	61	1.07	1.15	3.33	0.84	0.98
-30	**(-22)**	291	73	85	71	1.12	1.65	4.09	1.03	1.20
-25	**(-13)**	397	100	116	82	1.17	2.25	4.87	1.23	1.43
-20	**(- 4)**	524	132	154	92	1.23	2.98	5.69	1.43	1.67
-15	**(+ 5)**	675	170	198	103	1.30	3.85	6.54	1.65	1.92
-10	**(+14)**	852	215	250	114	1.37	4.88	7.46	1.88	2.19
-5	**(+23)**	1058	267	310	125	1.45	6.09	8.44	2.13	2.47

TEST CONDITIONS: **@115V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **55ºC (+131ºF))**

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)**	171	43	50	60	1.07	0.97	2.83	0.71	0.83
-30	**(-22)**	255	64	75	72	1.12	1.44	3.56	0.90	1.04
-25	**(-13)**	357	90	105	84	1.18	2.03	4.27	1.08	1.25
-20	**(- 4)**	480	121	141	97	1.25	2.73	4.98	1.26	1.46
-15	**(+ 5)**	626	158	183	110	1.34	3.57	5.70	1.44	1.67
-10	**(+14)**	799	201	234	124	1.44	4.58	6.44	1.62	1.89
-5	**(+23)**	1000	252	293	139	1.55	5.75	7.21	1.82	2.11

E - PERFORMANCE - CURVES

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)**	119	30	35	53	1.04	0.67	2.24	0.56	0.66
-30	**(-22)**	202	51	59	67	1.09	1.15	2.99	0.75	0.88
-25	**(-13)**	303	76	89	82	1.17	1.72	3.69	0.93	1.08
-20	**(- 4)**	425	107	124	98	1.26	2.42	4.34	1.09	1.27
-15	**(+ 5)**	570	144	167	115	1.37	3.25	4.97	1.25	1.46
-10	**(+14)**	741	187	217	133	1.50	4.25	5.58	1.41	1.63
-5	**(+23)**	941	237	276	152	1.65	5.41	6.19	1.56	1.81

F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
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		
3.1.2 Shape	Slanted 42º up + 45° to Back		
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 30° up + 24° to Back		
3.3 PROCESS	6.35 +0.08/-0.08	[mm]	(0.250" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		