

COMPRESSOR DEFINITION

Designation	EM IE30HER
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513306070

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 Expansion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 140 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	2.83	[cm ³] (0.173 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	10.000	
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/cm ²] (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	213514008/213514075/213515268	
3 Start capacitor	64-77(120)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM734LFBYY-53	
6 Start winding resistance	21.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.90	[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)	1.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	TUV - 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]
300	76	88	69	0.96	1.70	4.35	1.10	1.27

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)	147	37	43	49	0.86	0.83	3.01	0.76	0.88
-30 (-22)	220	55	64	57	0.89	1.24	3.87	0.97	1.13
-25 (-13)	306	77	90	66	0.94	1.74	4.67	1.18	1.37
-20 (- 4)	409	103	120	75	0.99	2.33	5.48	1.38	1.61
-15 (+ 5)	532	134	156	84	1.05	3.04	6.34	1.60	1.86
-10 (+14)	679	171	199	93	1.11	3.89	7.32	1.84	2.14
-5 (+23)	852	215	250	101	1.17	4.90	8.46	2.13	2.48

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)	110	28	32	48	0.86	0.62	2.28	0.58	0.67
-30 (-22)	181	46	53	56	0.89	1.03	3.23	0.81	0.95
-25 (-13)	265	67	78	66	0.94	1.51	4.05	1.02	1.19
-20 (- 4)	365	92	107	77	1.01	2.08	4.80	1.21	1.41
-15 (+ 5)	485	122	142	88	1.08	2.77	5.53	1.39	1.62
-10 (+14)	627	158	184	99	1.16	3.59	6.31	1.59	1.85
-5 (+23)	795	200	233	111	1.25	4.58	7.17	1.81	2.10

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)	56	14	16	41	0.83	0.32	1.37	0.34	0.40
-30 (-22)	128	32	38	51	0.86	0.73	2.47	0.62	0.72
-25 (-13)	213	54	62	63	0.92	1.21	3.38	0.85	0.99
-20 (- 4)	313	79	92	76	1.00	1.78	4.14	1.04	1.21
-15 (+ 5)	432	109	127	90	1.09	2.47	4.82	1.21	1.41
-10 (+14)	574	145	168	105	1.19	3.29	5.46	1.38	1.60
-5 (+23)	740	186	217	121	1.31	4.25	6.12	1.54	1.79

F - EXTERNAL CHARACTERISTICS

1 Base plate	NEW BASE PLATE		
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	Slanted 42° 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		