

### COMPRESSOR DEFINITION

Designation	EM Y60HER
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513308558

### 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		
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 pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	4.99	[cm <sup>3</sup> ] (0.305 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	14.400	
3 Lubricant charge	200	[ml] (6.76 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	8.24	[kg] (18.17 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (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	213514002/213514003/213514105	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM757NFBYY-53	
6 Start winding resistance	8.96	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.57	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	21.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.80	[A] - Measured according to UL 984
11 Approval boards certification	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]
610	154	179	121	1.62	3.47	5.04	1.27	1.48

### 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)	335	84	98	77	1.43	1.90	4.37	1.10	1.28
-30 (-22)	462	116	135	91	1.51	2.62	5.08	1.28	1.49
-25 (-13)	602	152	176	105	1.59	3.42	5.75	1.45	1.68
-20 (- 4)	766	193	224	119	1.67	4.36	6.42	1.62	1.88
-15 (+ 5)	965	243	283	135	1.77	5.51	7.12	1.79	2.09
-10 (+14)	1210	305	355	152	1.89	6.93	7.90	1.99	2.31

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)	287	72	84	77	1.44	1.63	3.72	0.94	1.09
-30 (-22)	416	105	122	94	1.53	2.36	4.42	1.11	1.29
-25 (-13)	555	140	163	110	1.62	3.15	5.04	1.27	1.48
-20 (- 4)	716	180	210	127	1.72	4.07	5.63	1.42	1.65
-15 (+ 5)	909	229	266	146	1.84	5.19	6.23	1.57	1.83
-10 (+14)	1145	289	336	166	1.99	6.56	6.88	1.73	2.02

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)	232	59	68	74	1.43	1.31	3.13	0.79	0.92
-30 (-22)	364	92	107	93	1.53	2.06	3.84	0.97	1.13
-25 (-13)	503	127	147	113	1.63	2.86	4.45	1.12	1.30
-20 (- 4)	660	166	194	133	1.75	3.76	4.99	1.26	1.46
-15 (+ 5)	848	214	248	154	1.90	4.84	5.51	1.39	1.62
-10 (+14)	1076	271	315	178	2.08	6.16	6.05	1.52	1.77

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal AMEM		
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 parallel to Base Plate		
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	Slanted parallel to Base Plate		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		