

COMPRESSOR DEFINITION

Designation	EM Y70HER
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513308553

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	-	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)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	5.72	[cm ³] (0.349 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	14.400	
3 Lubricant charge	190	[ml] (6.42 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	8.3	[kg] (18.30 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	213514083/213515007	
3 Start capacitor	270-324(150)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM762MFBZZ-53	
6 Start winding resistance	8.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	26.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.70	[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: @127V60Hz			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]
680	171	199	145	2.10	3.86	4.71	1.19	1.38

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz			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)	378	95	111	97	1.75	2.14	3.90	0.98	1.14
-30 (-22)	512	129	150	113	1.80	2.90	4.53	1.14	1.33
-25 (-13)	681	172	200	131	1.88	3.87	5.19	1.31	1.52
-20 (- 4)	887	223	260	151	1.99	5.05	5.88	1.48	1.72
-15 (+ 5)	1130	285	331	172	2.12	6.45	6.60	1.66	1.93
-10 (+14)	1414	356	414	193	2.25	8.10	7.33	1.85	2.15
-5 (+23)	1738	438	509	215	2.40	10.00	8.08	2.04	2.37

TEST CONDITIONS: @127V60Hz			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)	318	80	93	97	1.75	1.80	3.31	0.83	0.97
-30 (-22)	445	112	130	114	1.81	2.52	3.91	0.99	1.15
-25 (-13)	610	154	179	134	1.90	3.46	4.54	1.15	1.33
-20 (- 4)	815	205	239	157	2.03	4.64	5.19	1.31	1.52
-15 (+ 5)	1062	268	311	181	2.18	6.06	5.86	1.48	1.72
-10 (+14)	1352	341	396	206	2.35	7.74	6.54	1.65	1.92
-5 (+23)	1686	425	494	233	2.54	9.70	7.24	1.82	2.12

TEST CONDITIONS: @127V60Hz			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)	266	67	78	90	1.72	1.51	2.92	0.74	0.86
-30 (-22)	381	96	112	110	1.79	2.16	3.47	0.87	1.02
-25 (-13)	538	136	158	134	1.89	3.05	4.04	1.02	1.18
-20 (- 4)	738	186	216	160	2.04	4.20	4.61	1.16	1.35
-15 (+ 5)	983	248	288	189	2.23	5.61	5.20	1.31	1.52
-10 (+14)	1274	321	373	220	2.44	7.30	5.80	1.46	1.70
-5 (+23)	1612	406	472	252	2.68	9.27	6.40	1.61	1.88

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted parallel B.Plane 30°		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
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		