

### COMPRESSOR DEFINITION

Designation	EM Y70HER
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513308571

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 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 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	-	187 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	-	187 to 242 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	1/5	[hp]
2 Displacement	5.72	[cm <sup>3</sup> ] (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 <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514148	
3 Start capacitor	88-108(150)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM743KDBYY-53	
6 Start winding resistance	31.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	12.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.45	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			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	142	1.03	3.86	4.80	1.21	1.41

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			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	0.91	2.14	3.90	0.98	1.14
-30 (-22)	512	129	150	114	0.96	2.90	4.50	1.13	1.32
-25 (-13)	681	172	200	132	1.02	3.87	5.16	1.30	1.51
-20 (- 4)	887	223	260	151	1.09	5.05	5.88	1.48	1.72
-15 (+ 5)	1130	285	331	171	1.15	6.45	6.63	1.67	1.94
-10 (+14)	1414	356	414	191	1.21	8.10	7.40	1.86	2.17

TEST CONDITIONS: @220V60Hz			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	95	0.92	1.80	3.36	0.85	0.99
-30 (-22)	445	112	130	114	0.97	2.52	3.93	0.99	1.15
-25 (-13)	610	154	179	134	1.03	3.46	4.55	1.15	1.33
-20 (- 4)	815	205	239	156	1.10	4.64	5.20	1.31	1.52
-15 (+ 5)	1062	268	311	181	1.18	6.06	5.87	1.48	1.72
-10 (+14)	1352	341	396	207	1.26	7.74	6.54	1.65	1.92

TEST CONDITIONS: @220V60Hz			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	92	0.91	1.51	2.89	0.73	0.85
-30 (-22)	381	96	112	111	0.95	2.16	3.44	0.87	1.01
-25 (-13)	538	136	158	134	1.02	3.05	4.03	1.01	1.18
-20 (- 4)	738	186	216	160	1.09	4.20	4.63	1.17	1.36
-15 (+ 5)	983	248	288	188	1.19	5.61	5.23	1.32	1.53
-10 (+14)	1274	321	373	219	1.29	7.30	5.82	1.47	1.70

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
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	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	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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		