

COMPRESSOR DEFINITION

Designation	EM I60HEP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513307594

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50	[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	198 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 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	1/6	[hp]
2 Displacement	4.99	[cm ³] (0.305 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	14.400	
3 Lubricant charge	170	[ml] (5.75 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.65	[kg] (16.87 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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MC1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM189RHBYY-53	
6 Start winding resistance	32.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	17.85	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.05	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
455	115	133	109	0.78	2.59	4.16	1.05	1.22

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			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)	237	60	70	79	0.69	1.34	3.00	0.76	0.88
-30 (-22)	343	87	101	94	0.72	1.95	3.66	0.92	1.07
-25 (-13)	460	116	135	106	0.75	2.61	4.36	1.10	1.28
-20 (- 4)	599	151	175	117	0.79	3.41	5.13	1.29	1.50
-15 (+ 5)	768	194	225	128	0.83	4.38	5.96	1.50	1.75
-10 (+14)	978	247	287	141	0.88	5.61	6.87	1.73	2.01

TEST CONDITIONS: @220V50Hz			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)	188	47	55	79	0.69	1.06	2.40	0.60	0.70
-30 (-22)	294	74	86	94	0.72	1.67	3.13	0.79	0.92
-25 (-13)	409	103	120	107	0.76	2.32	3.83	0.97	1.12
-20 (- 4)	543	137	159	120	0.81	3.09	4.52	1.14	1.32
-15 (+ 5)	705	178	207	135	0.86	4.02	5.19	1.31	1.52
-10 (+14)	906	228	265	153	0.93	5.19	5.87	1.48	1.72

TEST CONDITIONS: @220V50Hz			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)	141	35	41	78	0.68	0.79	1.80	0.45	0.53
-30 (-22)	248	62	73	91	0.72	1.41	2.69	0.68	0.79
-25 (-13)	361	91	106	104	0.76	2.05	3.48	0.88	1.02
-20 (- 4)	491	124	144	118	0.82	2.79	4.18	1.05	1.22
-15 (+ 5)	646	163	189	136	0.88	3.69	4.79	1.21	1.40
-10 (+14)	838	211	245	158	0.96	4.80	5.32	1.34	1.56

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
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 plated steel		
3.1.2 Shape	Straight		
3.2 DISCHARGE	5 +0.18/-0.06	[mm]	(0.197" +0.007"/-0.002")
3.2.1 Material	Copper plated steel		
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 plated steel		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		