

COMPRESSOR DEFINITION

Designation	EM I60HSR
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513307254

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 -15°C	(-31°F to 5°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 242 V
8.2 LBP (43°C Ambient temperature)	Static	-	198 to 242 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	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)	7.68	[kg] (16.93 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 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514059	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM734KFBYY-53	
6 Start winding resistance	28.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	10.71/10.25	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.90/0.74	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.07/0.90	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

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]
570	144	167	124	0.80	3.24	4.60	1.16	1.35

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)	312	79	92	83	0.66	1.77	3.78	0.95	1.11
-30 (-22)	421	106	123	99	0.72	2.39	4.29	1.08	1.26
-25 (-13)	559	141	164	114	0.78	3.17	4.89	1.23	1.43
-20 (- 4)	728	183	213	131	0.84	4.14	5.56	1.40	1.63
-15 (+ 5)	930	234	273	148	0.90	5.31	6.27	1.58	1.84
-10 (+14)	1168	294	342	166	0.97	6.69	7.02	1.77	2.06

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)	270	68	79	82	0.65	1.53	3.28	0.83	0.96
-30 (-22)	376	95	110	100	0.72	2.13	3.78	0.95	1.11
-25 (-13)	509	128	149	118	0.79	2.89	4.32	1.09	1.27
-20 (- 4)	670	169	196	137	0.86	3.81	4.89	1.23	1.43
-15 (+ 5)	863	217	253	158	0.94	4.92	5.48	1.38	1.61
-10 (+14)	1088	274	319	179	1.03	6.23	6.06	1.53	1.78

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)	213	54	62	76	0.64	1.20	2.79	0.70	0.82
-30 (-22)	323	81	95	97	0.71	1.83	3.31	0.83	0.97
-25 (-13)	457	115	134	118	0.79	2.60	3.85	0.97	1.13
-20 (- 4)	618	156	181	141	0.87	3.52	4.38	1.10	1.28
-15 (+ 5)	807	203	236	166	0.97	4.60	4.89	1.23	1.43
-10 (+14)	1026	259	301	192	1.08	5.88	5.37	1.35	1.57

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal 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		
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	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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		