

COMPRESSOR DEFINITION

Designation	EM I45HEX
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513307134

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	CSIR		
6 Starting torque	HST - Hight starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static/Fan	-	98 to 140 V
8.2 LBP (43°C Ambient temperature)	Static/Fan	-	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	1/8	[hp]
2 Displacement	3.77	[cm ³] (0.230 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	13.300	
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	[kg] (15.43 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	213515003	
3 Start capacitor	233-280(115)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRP61AMK-5590	
6 Start winding resistance	7.94	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	15.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.10	[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]
450	113	132	97	1.27	2.56	4.65	1.17	1.36

TEST CONDITIONS: @115V60Hz			ASHRAELBP32 Fan		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]
450	113	132	97	1.27	2.56	4.65	1.17	1.36

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)	212	53	62	67	1.12	1.20	3.14	0.79	0.92
-30 (-22)	308	78	90	77	1.17	1.74	4.01	1.01	1.17
-25 (-13)	425	107	125	88	1.23	2.41	4.84	1.22	1.42
-20 (- 4)	563	142	165	100	1.30	3.20	5.66	1.43	1.66
-15 (+ 5)	720	181	211	111	1.38	4.11	6.45	1.63	1.89
-10 (+14)	896	226	262	123	1.46	5.13	7.25	1.83	2.12
-5 (+23)	1089	274	319	135	1.54	6.26	8.05	2.03	2.36

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)	157	40	46	62	1.10	0.89	2.52	0.64	0.74
-30 (-22)	254	64	74	75	1.16	1.44	3.38	0.85	0.99
-25 (-13)	372	94	109	89	1.23	2.11	4.18	1.05	1.23
-20 (- 4)	512	129	150	103	1.32	2.91	4.94	1.25	1.45
-15 (+ 5)	670	169	196	118	1.42	3.83	5.66	1.43	1.66
-10 (+14)	848	214	248	133	1.53	4.86	6.36	1.60	1.86
-5 (+23)	1043	263	306	149	1.64	6.00	7.03	1.77	2.06

E - PERFORMANCE - CURVES

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)	112	28	33	57	1.08	0.63	1.96	0.49	0.57
-30	(-22)	206	52	60	73	1.15	1.17	2.82	0.71	0.83
-25	(-13)	321	81	94	89	1.23	1.82	3.61	0.91	1.06
-20	(- 4)	458	115	134	106	1.34	2.60	4.32	1.09	1.27
-15	(+ 5)	614	155	180	124	1.46	3.50	4.97	1.25	1.46
-10	(+14)	789	199	231	142	1.59	4.52	5.58	1.40	1.63
-5	(+23)	982	247	288	160	1.73	5.65	6.14	1.55	1.80

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