

COMPRESSOR DEFINITION

Designation	EM I45HER
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513307416

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 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	90 to 110 V	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	90 to 110 V	103 to 140 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/cm²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/8	[hp]
2 Displacement	3.77	[cm³] (0.230 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	13.300	
3 Lubricant charge	160	[ml] (5.41 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.33	[kg] (16.16 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (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	213514040	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM757KFBYY-53	
6 Start winding resistance	11.90	[Ωat 25°C (77°F)] +/- 8%
7 Run winding resistance	5.00	[Ωat 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)	1.62	[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: @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]
420	106	123	98	1.30	2.39	4.29	1.08	1.26

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	73	1.13	1.20	2.89	0.73	0.85
-30	(-22)	308	78	90	82	1.19	1.74	3.80	0.96	1.11
-25	(-13)	425	107	125	92	1.25	2.41	4.66	1.17	1.37
-20	(- 4)	563	142	165	103	1.33	3.20	5.49	1.38	1.61
-15	(+ 5)	720	181	211	114	1.41	4.11	6.30	1.59	1.85
-10	(+14)	896	226	262	126	1.49	5.13	7.11	1.79	2.08

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	70	1.11	0.89	2.24	0.56	0.66
-30	(-22)	254	64	74	81	1.18	1.44	3.15	0.79	0.92
-25	(-13)	372	94	109	93	1.26	2.11	3.97	1.00	1.16
-20	(- 4)	512	129	150	108	1.35	2.91	4.74	1.20	1.39
-15	(+ 5)	670	169	196	123	1.46	3.83	5.46	1.38	1.60
-10	(+14)	848	214	248	138	1.57	4.86	6.16	1.55	1.80

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	65	1.09	0.63	1.73	0.44	0.51
-30	(-22)	206	52	60	78	1.16	1.17	2.64	0.67	0.77
-25	(-13)	321	81	94	93	1.26	1.82	3.45	0.87	1.01
-20	(- 4)	458	115	134	110	1.37	2.60	4.17	1.05	1.22
-15	(+ 5)	614	155	180	128	1.49	3.50	4.81	1.21	1.41
-10	(+14)	789	199	231	146	1.63	4.52	5.39	1.36	1.58

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal 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	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-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		

