

COMPRESSOR DEFINITION

Designation	EM I45HER
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513303408

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115 / 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	-	103 to 135 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 135 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	1/8	[hp]
2 Displacement	4.08	[cm ³] (0.249 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.400	
3 Lubricant charge	265	[ml] (8.96 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	7.6	[kg] (16.75 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 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213514091	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM743KFBYY-53	
6 Start winding resistance	13.35	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.65	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	12.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - 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]
435	110	127	104	1.27	2.47	4.18	1.05	1.22

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)	231	58	68	71	1.07	1.31	3.23	0.82	0.95
-30 (-22)	314	79	92	83	1.14	1.78	3.82	0.96	1.12
-25 (-13)	430	108	126	96	1.23	2.44	4.50	1.13	1.32
-20 (- 4)	576	145	169	110	1.32	3.28	5.23	1.32	1.53
-15 (+ 5)	749	189	219	124	1.42	4.27	6.00	1.51	1.76
-10 (+14)	943	238	276	138	1.52	5.41	6.80	1.71	1.99

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)	171	43	50	67	1.04	0.97	2.53	0.64	0.74
-30 (-22)	258	65	76	80	1.12	1.46	3.23	0.81	0.95
-25 (-13)	375	94	110	95	1.22	2.13	3.93	0.99	1.15
-20 (- 4)	519	131	152	112	1.34	2.95	4.62	1.17	1.36
-15 (+ 5)	687	173	201	130	1.47	3.92	5.29	1.33	1.55
-10 (+14)	874	220	256	148	1.61	5.01	5.90	1.49	1.73

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)	109	28	32	61	1.01	0.62	1.80	0.45	0.53
-30 (-22)	200	50	59	75	1.10	1.13	2.65	0.67	0.78
-25 (-13)	318	80	93	92	1.20	1.81	3.44	0.87	1.01
-20 (- 4)	460	116	135	111	1.33	2.62	4.15	1.04	1.21
-15 (+ 5)	624	157	183	132	1.49	3.56	4.75	1.20	1.39
-10 (+14)	804	203	235	155	1.67	4.60	5.23	1.32	1.53

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal AMEM		
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		