

COMPRESSOR DEFINITION

Designation	EM 2Y60HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513301500

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	RSCR		
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	-	98 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	98 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/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		[hp]
2 Displacement	5.54	[cm ³] (0.338 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.25	[kg] (15.98 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	PTC	
2.1 Starting device	8EA14C3/8EA21C3/QPS2-A4R7MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	4TM319NFBYY-53	
6 Start winding resistance	6.10	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.75	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	10.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.60	[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 - TUV - 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]
655	165	192	116	1.07	3.72	5.64	1.42	1.65

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		ASHRAE32 Static				(Condensing temperature 35°C (+95°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)	391	99	115	75	0.72	2.21	5.21	1.31	1.53
-30 (-22)	499	126	146	85	0.80	2.83	5.92	1.49	1.73
-25 (-13)	662	167	194	97	0.90	3.76	6.85	1.73	2.01
-20 (- 4)	876	221	257	110	1.01	4.99	7.93	2.00	2.32
-15 (+ 5)	1138	287	334	125	1.14	6.50	9.12	2.30	2.67
-10 (+14)	1445	364	424	140	1.29	8.28	10.34	2.61	3.03

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)	364	92	107	81	0.75	2.06	4.51	1.14	1.32
-30 (-22)	472	119	138	92	0.84	2.68	5.16	1.30	1.51
-25 (-13)	630	159	185	105	0.95	3.57	5.98	1.51	1.75
-20 (- 4)	833	210	244	120	1.08	4.74	6.93	1.75	2.03
-15 (+ 5)	1081	272	317	136	1.23	6.17	7.94	2.00	2.33
-10 (+14)	1368	345	401	153	1.39	7.84	8.96	2.26	2.62

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)	338	85	99	86	0.77	1.91	3.93	0.99	1.15
-30 (-22)	445	112	130	98	0.87	2.52	4.54	1.14	1.33
-25 (-13)	597	150	175	112	1.00	3.39	5.30	1.34	1.55
-20 (- 4)	790	199	231	128	1.15	4.50	6.15	1.55	1.80
-15 (+ 5)	1021	257	299	145	1.31	5.83	7.02	1.77	2.06
-10 (+14)	1288	325	377	164	1.48	7.38	7.86	1.98	2.30

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)	311	78	91	92	0.79	1.76	3.39	0.85	0.99
-30	(-22)	417	105	122	104	0.91	2.37	4.01	1.01	1.17
-25	(-13)	563	142	165	118	1.05	3.20	4.74	1.19	1.39
-20	(- 4)	745	188	218	135	1.21	4.24	5.52	1.39	1.62
-15	(+ 5)	961	242	282	153	1.38	5.49	6.30	1.59	1.85
-10	(+14)	1207	304	354	173	1.57	6.92	7.01	1.77	2.05

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
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	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		