

COMPRESSOR DEFINITION

Designation	EM 2Y60HLP
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513304111

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50	[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)	-	-	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 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	5.19	[cm ³] (0.317 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	15.000	
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)	7.68	[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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C1/QPS2-A22MG1	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	4TM189KFBYY-53	
6 Start winding resistance	27.43	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	24.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	4.60	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.49	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.61	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
478	120	140	96	0.62	2.72	4.99	1.26	1.46

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			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)	283	71	83	63	0.52	1.60	4.46	1.13	1.31
-30 (-22)	391	99	115	74	0.56	2.22	5.31	1.34	1.56
-25 (-13)	528	133	155	85	0.59	3.00	6.20	1.56	1.82
-20 (- 4)	695	175	204	97	0.63	3.95	7.17	1.81	2.10
-15 (+ 5)	892	225	261	109	0.67	5.09	8.23	2.07	2.41
-10 (+14)	1120	282	328	119	0.71	6.42	9.43	2.38	2.76

TEST CONDITIONS: @220V50Hz			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)	245	62	72	66	0.53	1.38	3.73	0.94	1.09
-30 (-22)	348	88	102	76	0.56	1.97	4.57	1.15	1.34
-25 (-13)	481	121	141	88	0.60	2.73	5.40	1.36	1.58
-20 (- 4)	644	162	189	103	0.64	3.67	6.24	1.57	1.83
-15 (+ 5)	838	211	246	117	0.69	4.79	7.13	1.80	2.09
-10 (+14)	1064	268	312	132	0.75	6.10	8.08	2.04	2.37

TEST CONDITIONS: @220V50Hz			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)	201	51	59	69	0.54	1.14	2.95	0.74	0.86
-30 (-22)	299	75	87	78	0.57	1.69	3.85	0.97	1.13
-25 (-13)	426	107	125	91	0.61	2.42	4.67	1.18	1.37
-20 (- 4)	585	147	171	107	0.66	3.33	5.45	1.37	1.60
-15 (+ 5)	775	195	227	124	0.72	4.42	6.21	1.57	1.82
-10 (+14)	997	251	292	142	0.79	5.71	6.99	1.76	2.05

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	151	38	44	72	0.57	0.85	2.07	0.52	0.61
-30	(-22)	242	61	71	80	0.59	1.37	3.08	0.78	0.90
-25	(-13)	363	91	106	93	0.63	2.06	3.96	1.00	1.16
-20	(- 4)	515	130	151	109	0.68	2.93	4.73	1.19	1.39
-15	(+ 5)	700	176	205	129	0.74	4.00	5.43	1.37	1.59
-10	(+14)	917	231	269	151	0.83	5.26	6.08	1.53	1.78

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	Slanted 42° up + 45° to Back		
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 parallel BP+24°to Back		
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	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		