COMPRESSOR DEFINITION

Designation	**EM 2Y80HLP**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513301514**

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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	198 to 255 V	-
8.2 LBP (43ºC Ambient temperature)	Static	198 to 255 V	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm²] (202 psig)	/ ºC - ºF
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	6.76	[cm³] (0.413 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	17.000	
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)	8.1	[kg] (17.86 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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C1/8EA17E63/QPS2-A22MG1/QPS2-C22MD3J8	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM213PFBYY-53	
6 Start winding resistance	22.36	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	15.24	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	6.07	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.17	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.38	[A] - Measured according to UL 984
11 Approval boards certification	CE - IRAM - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ASHRAELBP32**			Evaporating temperature		**-23.3°C (-9.94°F)**
@220V50Hz			**Static**			(Condensing temperature		**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]
691	174	202	122	0.74	3.93	5.69	1.43	1.67

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **45ºC (+113ºF))**			
@220V50Hz		**Static**								
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)**	347	87	102	74	0.58	1.96	4.69	1.18	1.37
-30	**(-22)**	490	124	144	92	0.65	2.78	5.35	1.35	1.57
-25	**(-13)**	682	172	200	110	0.72	3.87	6.18	1.56	1.81
-20	**(- 4)**	915	231	268	129	0.79	5.21	7.12	1.79	2.09
-15	**(+ 5)**	1184	298	347	147	0.86	6.76	8.11	2.04	2.38
-10	**(+14)**	1481	373	434	164	0.92	8.48	9.10	2.29	2.67

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **55ºC (+131ºF))**			
@220V50Hz		**Static**								
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	76	0.58	1.76	4.10	1.03	1.20
-30	**(-22)**	438	110	128	94	0.65	2.48	4.67	1.18	1.37
-25	**(-13)**	618	156	181	114	0.72	3.51	5.39	1.36	1.58
-20	**(- 4)**	843	212	247	135	0.81	4.80	6.20	1.56	1.82
-15	**(+ 5)**	1107	279	324	157	0.90	6.32	7.05	1.78	2.06
-10	**(+14)**	1405	354	412	179	0.99	8.05	7.86	1.98	2.30

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **65ºC (+149ºF))**			
@220V50Hz		**Static**								
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)**	267	67	78	71	0.58	1.51	3.74	0.94	1.10
-30	**(-22)**	371	93	109	89	0.64	2.10	4.21	1.06	1.23
-25	**(-13)**	531	134	156	111	0.72	3.02	4.81	1.21	1.41
-20	**(- 4)**	742	187	217	135	0.81	4.22	5.48	1.38	1.61
-15	**(+ 5)**	996	251	292	162	0.92	5.68	6.16	1.55	1.80
-10	**(+14)**	1287	324	377	190	1.04	7.37	6.79	1.71	1.99

F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate 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 42º 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 parallet 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 parallel BP+45°to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		