COMPRESSOR DEFINITION

Designation	**EM 2Y70HLP**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513301505**

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-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°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 pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm²] (230 psig)	/ ºC - ºF
9.2 Peak (gauge)	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	6.36	[cm³] (0.388 cu.in)
2.1 Bore [mm]	22.500	
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)	7.75	[kg] (17.09 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	4TM232NFBYY-53	
6 Start winding resistance	32.25	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	13.40	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.35	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	1.34	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.57	[A] - Measured according to UL 984
11 Approval boards certification	IRAM	

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]
653	165	191	118	0.82	3.71	5.52	1.39	1.62

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)**	341	86	100	79	0.72	1.93	4.31	1.09	1.26
-30	**(-22)**	479	121	140	94	0.76	2.71	5.10	1.28	1.49
-25	**(-13)**	647	163	190	109	0.81	3.68	5.91	1.49	1.73
-20	**(- 4)**	845	213	248	126	0.86	4.81	6.74	1.70	1.97
-15	**(+ 5)**	1073	270	314	143	0.92	6.12	7.56	1.91	2.22
-10	**(+14)**	1328	335	389	159	0.99	7.61	8.38	2.11	2.46
-5	**(+23)**	1611	406	472	175	1.05	9.27	9.17	2.31	2.69

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)**	293	74	86	78	0.72	1.66	3.78	0.95	1.11
-30	**(-22)**	421	106	123	94	0.76	2.38	4.49	1.13	1.32
-25	**(-13)**	587	148	172	111	0.81	3.33	5.23	1.32	1.53
-20	**(- 4)**	791	199	232	131	0.88	4.50	6.00	1.51	1.76
-15	**(+ 5)**	1031	260	302	152	0.95	5.89	6.78	1.71	1.99
-10	**(+14)**	1308	330	383	173	1.03	7.49	7.56	1.91	2.22
-5	**(+23)**	1620	408	475	195	1.12	9.32	8.33	2.10	2.44

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)**	265	67	78	77	0.71	1.50	3.42	0.86	1.00
-30	**(-22)**	364	92	107	93	0.75	2.06	3.99	1.01	1.17
-25	**(-13)**	509	128	149	111	0.81	2.89	4.61	1.16	1.35
-20	**(- 4)**	699	176	205	133	0.89	3.98	5.27	1.33	1.54
-15	**(+ 5)**	934	235	274	157	0.98	5.33	5.95	1.50	1.74
-10	**(+14)**	1213	306	355	182	1.08	6.95	6.63	1.67	1.94
-5	**(+23)**	1535	387	450	210	1.18	8.83	7.32	1.84	2.15

F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
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	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 42° up + 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		