

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	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)	-	-	-
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	8EA17C3/8EA17E62/8EA17E63/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(450)/5(450)	[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)	4.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.41	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.51	[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]
484	122	142	92	0.42	2.75	5.27	1.33	1.54

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	0.32	1.60	4.46	1.12	1.31
-30 (-22)	394	99	115	73	0.34	2.23	5.37	1.35	1.57
-25 (-13)	532	134	156	84	0.38	3.02	6.32	1.59	1.85
-20 (- 4)	699	176	205	96	0.43	3.98	7.34	1.85	2.15
-15 (+ 5)	897	226	263	107	0.48	5.12	8.49	2.14	2.49
-10 (+14)	1127	284	330	116	0.53	6.46	9.81	2.47	2.87

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)	246	62	72	66	0.32	1.39	3.75	0.95	1.10
-30 (-22)	352	89	103	75	0.35	2.00	4.70	1.18	1.38
-25 (-13)	487	123	143	86	0.39	2.77	5.61	1.41	1.64
-20 (- 4)	652	164	191	99	0.44	3.71	6.53	1.65	1.91
-15 (+ 5)	848	214	249	112	0.50	4.84	7.52	1.89	2.20
-10 (+14)	1078	272	316	126	0.57	6.17	8.60	2.17	2.52

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)	202	51	59	69	0.35	1.14	2.95	0.74	0.87
-30 (-22)	302	76	88	77	0.37	1.71	3.98	1.00	1.17
-25 (-13)	431	109	126	88	0.41	2.45	4.90	1.24	1.44
-20 (- 4)	591	149	173	102	0.46	3.36	5.78	1.46	1.69
-15 (+ 5)	784	198	230	117	0.53	4.48	6.64	1.67	1.95
-10 (+14)	1011	255	296	134	0.61	5.79	7.53	1.90	2.21

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)	152	38	45	73	0.39	0.86	2.04	0.51	0.60
-30	(-22)	243	61	71	78	0.40	1.38	3.19	0.80	0.93
-25	(-13)	364	92	107	89	0.43	2.07	4.17	1.05	1.22
-20	(- 4)	518	130	152	103	0.49	2.95	5.04	1.27	1.48
-15	(+ 5)	705	178	207	121	0.57	4.02	5.82	1.47	1.71
-10	(+14)	928	234	272	141	0.65	5.31	6.57	1.66	1.93

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		