

COMPRESSOR DEFINITION

Designation	EM 2U60HLP
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513305549

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 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	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)	Static	-	198 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	-	198 to 242 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	1/5	[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)	7.3	[kg] (16.09 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 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C1/8EA17E61/8EA17E62/8EA17E63/QPS2-A22MG1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM232NFBYY-53	
6 Start winding resistance	20.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	6.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.87	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	0.90	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - TUV - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			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]
626	158	183	129	0.88	3.56	4.86	1.22	1.42

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		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)	357	90	105	82	0.78	2.02	4.34	1.09	1.27
-30 (-22)	484	122	142	96	0.81	2.74	5.07	1.28	1.49
-25 (-13)	656	165	192	112	0.85	3.72	5.89	1.48	1.73
-20 (- 4)	873	220	256	129	0.89	4.97	6.78	1.71	1.99
-15 (+ 5)	1135	286	333	146	0.93	6.48	7.75	1.95	2.27
-10 (+14)	1443	364	423	164	0.99	8.27	8.80	2.22	2.58

TEST CONDITIONS: @220V60Hz		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)	308	78	90	83	0.77	1.74	3.69	0.93	1.08
-30 (-22)	438	110	128	100	0.82	2.48	4.42	1.11	1.29
-25 (-13)	610	154	179	118	0.86	3.46	5.18	1.31	1.52
-20 (- 4)	823	207	241	137	0.91	4.68	5.99	1.51	1.76
-15 (+ 5)	1078	272	316	157	0.98	6.15	6.85	1.73	2.01
-10 (+14)	1376	347	403	177	1.05	7.88	7.76	1.96	2.27

TEST CONDITIONS: @220V60Hz		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)	248	63	73	83	0.76	1.40	2.99	0.75	0.88
-30 (-22)	381	96	112	102	0.81	2.16	3.76	0.95	1.10
-25 (-13)	552	139	162	122	0.87	3.13	4.53	1.14	1.33
-20 (- 4)	761	192	223	143	0.93	4.33	5.31	1.34	1.55
-15 (+ 5)	1008	254	295	166	1.01	5.75	6.10	1.54	1.79
-10 (+14)	1295	326	379	188	1.10	7.42	6.91	1.74	2.03

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		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)	177	45	52	86	0.75	1.00	2.06	0.52	0.60
-30	(-22)	312	79	91	106	0.81	1.77	2.91	0.73	0.85
-25	(-13)	481	121	141	128	0.88	2.73	3.73	0.94	1.09
-20	(- 4)	685	173	201	151	0.95	3.90	4.53	1.14	1.33
-15	(+ 5)	925	233	271	175	1.04	5.28	5.31	1.34	1.56
-10	(+14)	1200	302	352	198	1.15	6.87	6.08	1.53	1.78

F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +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 30° up + 24° to Back		
3.3 PROCESS	6.35 +0.08/-0.08	[mm]	(0.250" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		