

COMPRESSOR DEFINITION

Designation	EM 2U60HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513305532

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115-127 / 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	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 140 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)	7.45	[kg] (16.42 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA14C1/8EA14E61/8EA14E62/8EA14E63/QPS2-A4R7MG1/Q	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM427LFBYY-53	
6 Start winding resistance	7.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	12.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.48	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.55	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - TUV - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @127V60Hz			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]
627	158	184	131	1.63	3.56	4.80	1.21	1.41

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		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)	333	84	98	75	1.47	1.88	4.42	1.11	1.30
-30 (-22)	474	119	139	94	1.52	2.69	5.07	1.28	1.48
-25 (-13)	646	163	189	112	1.59	3.67	5.79	1.46	1.70
-20 (- 4)	855	216	251	130	1.68	4.87	6.61	1.66	1.94
-15 (+ 5)	1108	279	325	147	1.77	6.33	7.55	1.90	2.21
-10 (+14)	1411	355	413	163	1.87	8.08	8.64	2.18	2.53

TEST CONDITIONS: @127V60Hz		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)	302	76	88	82	1.48	1.71	3.70	0.93	1.08
-30 (-22)	443	112	130	100	1.52	2.51	4.42	1.11	1.29
-25 (-13)	611	154	179	119	1.60	3.47	5.14	1.29	1.50
-20 (- 4)	814	205	238	138	1.70	4.63	5.88	1.48	1.72
-15 (+ 5)	1057	266	310	158	1.82	6.03	6.69	1.69	1.96
-10 (+14)	1347	339	395	178	1.94	7.72	7.57	1.91	2.22

TEST CONDITIONS: @127V60Hz		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)	250	63	73	87	1.49	1.41	2.91	0.73	0.85
-30 (-22)	392	99	115	104	1.53	2.22	3.74	0.94	1.10
-25 (-13)	558	141	163	123	1.61	3.17	4.51	1.14	1.32
-20 (- 4)	755	190	221	144	1.72	4.30	5.24	1.32	1.54
-15 (+ 5)	990	249	290	166	1.86	5.65	5.96	1.50	1.75
-10 (+14)	1268	320	372	190	2.01	7.27	6.68	1.68	1.96

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		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)	178	45	52	90	1.51	1.01	1.98	0.50	0.58
-30	(-22)	322	81	94	106	1.54	1.82	2.99	0.75	0.88
-25	(-13)	487	123	143	126	1.62	2.77	3.87	0.97	1.13
-20	(- 4)	680	171	199	148	1.74	3.87	4.63	1.17	1.36
-15	(+ 5)	908	229	266	172	1.90	5.18	5.31	1.34	1.55
-10	(+14)	1176	296	345	199	2.08	6.74	5.92	1.49	1.73

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 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		