COMPRESSOR DEFINITION

Designation	**EM 2U50HLP**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513305506**

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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	-	103 to 140 V
8.2 LBP (43ºC Ambient temperature)	Static	-	103 to 140 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	1/6	[hp]
2 Displacement	4.50	[cm³] (0.275 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	13.000	
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)	7.5	[kg] (16.53 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA14C1/QPS2-A4R7MG1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	5SP14X319NFX	
6 Start winding resistance	6.65	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	5.56	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	12.75	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.13	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.47	[A] - Measured according to UL 984
11 Approval boards certification	CE - NOM - UKCA - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@115V60Hz**			**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]
500	126	147	105	1.46	2.84	4.77	1.20	1.40

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@115V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **35ºC (+95ºF))**

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	71	1.28	1.76	4.35	1.10	1.28
-30	**(-22)**	414	104	121	81	1.34	2.34	5.12	1.29	1.50
-25	**(-13)**	541	136	158	91	1.39	3.07	5.96	1.50	1.75
-20	**(- 4)**	700	176	205	102	1.44	3.98	6.90	1.74	2.02
-15	**(+ 5)**	900	227	264	112	1.50	5.14	7.99	2.01	2.34
-10	**(+14)**	1149	290	337	124	1.56	6.59	9.24	2.33	2.71

TEST CONDITIONS: **@115V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **45ºC (+113ºF))**

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)**	266	67	78	72	1.30	1.50	3.71	0.93	1.09
-30	**(-22)**	375	95	110	84	1.36	2.13	4.48	1.13	1.31
-25	**(-13)**	505	127	148	96	1.41	2.87	5.27	1.33	1.55
-20	**(- 4)**	664	167	194	109	1.46	3.78	6.12	1.54	1.79
-15	**(+ 5)**	859	216	252	122	1.53	4.90	7.05	1.78	2.06
-10	**(+14)**	1099	277	322	135	1.62	6.30	8.09	2.04	2.37

TEST CONDITIONS: **@115V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **55ºC (+131ºF))**

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)**	211	53	62	68	1.30	1.19	3.08	0.78	0.90
-30	**(-22)**	327	82	96	83	1.36	1.86	3.90	0.98	1.14
-25	**(-13)**	460	116	135	98	1.42	2.61	4.68	1.18	1.37
-20	**(- 4)**	618	156	181	114	1.50	3.52	5.45	1.37	1.60
-15	**(+ 5)**	808	204	237	129	1.59	4.61	6.25	1.58	1.83
-10	**(+14)**	1039	262	304	146	1.71	5.95	7.11	1.79	2.08

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@115V60Hz **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)**	147	37	43	61	1.26	0.83	2.43	0.61	0.71
-30	**(-22)**	270	68	79	79	1.33	1.53	3.32	0.84	0.97
-25	**(-13)**	406	102	119	98	1.42	2.31	4.11	1.04	1.20
-20	**(- 4)**	563	142	165	117	1.53	3.20	4.84	1.22	1.42
-15	**(+ 5)**	748	188	219	136	1.66	4.27	5.54	1.40	1.62
-10	**(+14)**	970	244	284	156	1.83	5.55	6.25	1.57	1.83

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal 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 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 30° 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		