COMPRESSOR DEFINITION

Designation	**EM 2U80HLP**
Nominal Voltage/Frequency	**220 V 60 Hz**
Engineering Number	**513305526**

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	RSCR		
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 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	1/4	[hp]
2 Displacement	6.76	[cm³] (0.413 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	17.000	
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)	7.53	[kg] (16.60 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 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C3/8EA17E63/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(350)	[µF(VAC minimum)]
5 Motor protection	4TM319KFBYY-53	
6 Start winding resistance	23.20	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	11.40	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	10.50/9.85	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.78/1.54	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	2.06/1.82	[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]
782	197	229	151	1.06	4.44	5.18	1.31	1.52

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V60Hz**		**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)**	430	108	126	97	0.91	2.43	4.45	1.12	1.30
-30	**(-22)**	615	155	180	114	0.95	3.49	5.38	1.35	1.58
-25	**(-13)**	822	207	241	131	1.00	4.67	6.27	1.58	1.84
-20	**(- 4)**	1065	268	312	149	1.05	6.06	7.17	1.81	2.10
-15	**(+ 5)**	1358	342	398	167	1.11	7.75	8.12	2.05	2.38
-10	**(+14)**	1714	432	502	186	1.18	9.82	9.18	2.31	2.69

TEST CONDITIONS: **@220V60Hz**		**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)**	392	99	115	100	0.92	2.22	3.91	0.99	1.15
-30	**(-22)**	569	143	167	119	0.97	3.22	4.76	1.20	1.39
-25	**(-13)**	766	193	224	138	1.02	4.35	5.54	1.40	1.62
-20	**(- 4)**	996	251	292	158	1.08	5.67	6.31	1.59	1.85
-15	**(+ 5)**	1274	321	373	179	1.15	7.27	7.11	1.79	2.08
-10	**(+14)**	1613	406	473	201	1.23	9.24	7.98	2.01	2.34

TEST CONDITIONS: **@220V60Hz**		**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)**	342	86	100	101	0.92	1.93	3.38	0.85	0.99
-30	**(-22)**	515	130	151	122	0.98	2.92	4.20	1.06	1.23
-25	**(-13)**	706	178	207	143	1.04	4.01	4.93	1.24	1.44
-20	**(- 4)**	928	234	272	166	1.11	5.28	5.61	1.41	1.64
-15	**(+ 5)**	1195	301	350	190	1.19	6.82	6.30	1.59	1.85
-10	**(+14)**	1522	383	446	215	1.29	8.72	7.04	1.78	2.06

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@220V60Hz **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)**	280	71	82	100	0.90	1.58	2.81	0.71	0.82
-30	**(-22)**	454	114	133	123	0.97	2.57	3.65	0.92	1.07
-25	**(-13)**	643	162	188	147	1.04	3.65	4.37	1.10	1.28
-20	**(- 4)**	862	217	252	172	1.12	4.90	5.02	1.27	1.47
-15	**(+ 5)**	1123	283	329	199	1.22	6.41	5.65	1.42	1.66
-10	**(+14)**	1441	363	422	228	1.33	8.26	6.31	1.59	1.85

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 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 parallet 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 parallel BP+45°to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		