

COMPRESSOR DEFINITION

Designation	EM U60CLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513306159

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
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	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	9.04	[cm ³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.35	[kg] (16.20 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL 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	4TM319RFBYY-53	
6 Start winding resistance	5.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.66	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - IMTRO - TUV - UKCA - UL	

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 (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
597	150	175	119	1.49	1.87	5.00	1.26	1.47

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz			ASHRAE32 Static		(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	346	87	101	70	1.22	1.08	4.54	1.14	1.33
-30	(-22)	466	117	136	105	1.29	1.46	4.80	1.21	1.41
-25	(-13)	606	153	178	117	1.36	1.90	5.56	1.40	1.63
-20	(- 4)	774	195	227	119	1.44	2.43	6.60	1.66	1.93
-15	(+ 5)	980	247	287	121	1.54	3.08	7.74	1.95	2.27
-10	(+14)	1231	310	361	133	1.65	3.88	8.76	2.21	2.57

TEST CONDITIONS: @127V60Hz			ASHRAE32 Static		(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	331	84	97	81	1.24	1.04	4.07	1.02	1.19
-30	(-22)	441	111	129	116	1.31	1.38	4.20	1.06	1.23
-25	(-13)	570	144	167	129	1.39	1.79	4.84	1.22	1.42
-20	(- 4)	727	183	213	129	1.48	2.28	5.79	1.46	1.70
-15	(+ 5)	920	232	270	129	1.60	2.90	6.86	1.73	2.01
-10	(+14)	1157	292	339	137	1.73	3.65	7.83	1.97	2.30

TEST CONDITIONS: @127V60Hz			ASHRAE32 Static		(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	310	78	91	109	1.25	0.97	3.15	0.79	0.92
-30	(-22)	411	104	121	149	1.33	1.29	3.12	0.79	0.91
-25	(-13)	532	134	156	165	1.42	1.67	3.63	0.91	1.06
-20	(- 4)	679	171	199	167	1.53	2.13	4.47	1.13	1.31
-15	(+ 5)	861	217	252	167	1.66	2.71	5.45	1.37	1.60
-10	(+14)	1087	274	319	175	1.81	3.43	6.36	1.60	1.86

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	280	70	82	71	1.25	0.88	3.58	0.90	1.05
-30	(-22)	376	95	110	118	1.34	1.18	3.38	0.85	0.99
-25	(-13)	489	123	143	140	1.44	1.54	3.74	0.94	1.09
-20	(- 4)	629	158	184	147	1.56	1.98	4.45	1.12	1.30
-15	(+ 5)	803	202	235	150	1.71	2.53	5.32	1.34	1.56
-10	(+14)	1020	257	299	160	1.88	3.22	6.15	1.55	1.80

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		