

### COMPRESSOR DEFINITION

Designation	EM U30CLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513306171

### 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 <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/10	[hp]
2 Displacement	5.19	[cm <sup>3</sup> ] (0.317 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	15.000	
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)	6.67	[kg] (14.70 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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	7M4R7MC1/8EA14C1/8EA14E62/8M4R7MC1/QPS2-A4R7MG1/	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	4TM302KFBYY-53	
6 Start winding resistance	7.02	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.38	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	7.45	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.61	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.94	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

### 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]
341	86	100	77	1.11	1.07	4.46	1.12	1.31

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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]
-35	(-31)	207	52	61	55	1.02	0.65	3.75	0.95	1.10
-30	(-22)	275	69	81	62	1.05	0.86	4.41	1.11	1.29
-25	(-13)	361	91	106	69	1.07	1.13	5.24	1.32	1.53
-20	(- 4)	465	117	136	75	1.10	1.46	6.19	1.56	1.81
-15	(+ 5)	592	149	174	82	1.14	1.86	7.24	1.83	2.12
-10	(+14)	743	187	218	89	1.18	2.34	8.35	2.11	2.45

TEST CONDITIONS: @115V60Hz		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]
-35	(-31)	193	49	57	57	1.03	0.60	3.42	0.86	1.00
-30	(-22)	256	64	75	65	1.06	0.80	3.95	1.00	1.16
-25	(-13)	336	85	98	72	1.09	1.05	4.64	1.17	1.36
-20	(- 4)	436	110	128	80	1.13	1.37	5.44	1.37	1.59
-15	(+ 5)	557	140	163	88	1.17	1.75	6.33	1.60	1.86
-10	(+14)	704	177	206	97	1.22	2.22	7.27	1.83	2.13

TEST CONDITIONS: @115V60Hz		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]
-35	(-31)	178	45	52	56	1.02	0.56	3.21	0.81	0.94
-30	(-22)	234	59	69	65	1.05	0.73	3.63	0.92	1.06
-25	(-13)	308	78	90	73	1.09	0.97	4.20	1.06	1.23
-20	(- 4)	402	101	118	82	1.13	1.26	4.87	1.23	1.43
-15	(+ 5)	518	130	152	92	1.19	1.63	5.61	1.41	1.65
-10	(+14)	658	166	193	103	1.25	2.08	6.39	1.61	1.87

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	162	41	47	52	1.02	0.51	3.07	0.77	0.90
-30	(-22)	211	53	62	62	1.05	0.66	3.40	0.86	1.00
-25	(-13)	278	70	81	72	1.09	0.87	3.86	0.97	1.13
-20	(- 4)	365	92	107	83	1.14	1.15	4.42	1.11	1.29
-15	(+ 5)	474	119	139	94	1.20	1.49	5.03	1.27	1.47
-10	(+14)	608	153	178	107	1.28	1.92	5.67	1.43	1.66

### 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	6.5 +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		