

### COMPRESSOR DEFINITION

Designation	EM U60CLP
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513306556

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
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	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	-	198 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	-	198 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating (gauge)	6.9	[kgf/cm <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak (gauge)	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	9.04	[cm <sup>3</sup> ] (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)	8.6	[kg] (18.96 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### 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	7M220MC1/8EA17C1/QPS2-A22MG1	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	4TM283NFBYY-53	
6 Start winding resistance	19.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.10	[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)	2.79	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	3.21	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

### 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]
597	150	175	124	1.01	1.87	4.81	1.21	1.41

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			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)	360	91	105	92	0.95	1.13	3.87	0.97	1.13
-30 (-22)	481	121	141	103	0.97	1.51	4.63	1.17	1.36
-25 (-13)	623	157	183	114	0.99	1.96	5.46	1.38	1.60
-20 (- 4)	794	200	233	125	1.02	2.49	6.35	1.60	1.86
-15 (+ 5)	1000	252	293	137	1.05	3.15	7.30	1.84	2.14
-10 (+14)	1247	314	365	150	1.09	3.93	8.29	2.09	2.43

TEST CONDITIONS: @220V60Hz			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)	322	81	94	93	0.96	1.01	3.50	0.88	1.03
-30 (-22)	436	110	128	105	0.98	1.37	4.16	1.05	1.22
-25 (-13)	572	144	168	117	1.01	1.80	4.88	1.23	1.43
-20 (- 4)	737	186	216	130	1.04	2.32	5.65	1.42	1.66
-15 (+ 5)	937	236	275	144	1.07	2.95	6.49	1.63	1.90
-10 (+14)	1179	297	346	160	1.12	3.72	7.37	1.86	2.16

TEST CONDITIONS: @220V60Hz			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)	304	77	89	94	0.96	0.95	3.26	0.82	0.96
-30 (-22)	409	103	120	107	0.98	1.28	3.82	0.96	1.12
-25 (-13)	537	135	157	121	1.01	1.69	4.45	1.12	1.30
-20 (- 4)	695	175	204	135	1.05	2.18	5.14	1.29	1.50
-15 (+ 5)	889	224	260	151	1.09	2.80	5.88	1.48	1.72
-10 (+14)	1125	283	330	169	1.14	3.55	6.66	1.68	1.95

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		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)	279	70	82	94	0.95	0.87	2.94	0.74	0.86
-30	(-22)	375	94	110	109	0.98	1.18	3.43	0.87	1.01
-25	(-13)	494	125	145	124	1.02	1.55	3.99	1.01	1.17
-20	(- 4)	643	162	189	140	1.06	2.02	4.60	1.16	1.35
-15	(+ 5)	829	209	243	157	1.11	2.61	5.27	1.33	1.54
-10	(+14)	1058	267	310	177	1.17	3.34	5.99	1.51	1.75

### 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 42° 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		