

### COMPRESSOR DEFINITION

Designation	EM UE60CLP
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513306259

### 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)	-	-	-
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	1/6	[hp]
2 Displacement	9.34	[cm <sup>3</sup> ] (0.570 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	17.600	
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)	7.74	[kg] (17.06 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	8EA17C1/QPS2-A22MG1/QPS2-A22MG1 092	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	4TM302KFBYY-53	
6 Start winding resistance	29.03	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	16.19	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	7.25	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.98	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	0.98	[A] - Measured according to UL 984
11 Approval boards certification		

### 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]
599	151	176	127	1.05	1.88	4.72	1.19	1.38

### 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)	380	96	111	88	0.98	1.19	4.31	1.09	1.26
-30 (-22)	490	124	144	101	1.00	1.54	4.88	1.23	1.43
-25 (-13)	641	161	188	114	1.03	2.01	5.65	1.42	1.66
-20 (- 4)	832	210	244	127	1.06	2.61	6.56	1.65	1.92
-15 (+ 5)	1063	268	312	141	1.09	3.35	7.53	1.90	2.21
-10 (+14)	1336	337	391	157	1.13	4.21	8.52	2.15	2.50

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)	337	85	99	90	0.99	1.05	3.73	0.94	1.09
-30 (-22)	445	112	130	104	1.01	1.40	4.29	1.08	1.26
-25 (-13)	593	149	174	118	1.03	1.86	5.01	1.26	1.47
-20 (- 4)	781	197	229	133	1.07	2.45	5.85	1.48	1.72
-15 (+ 5)	1009	254	296	149	1.11	3.18	6.75	1.70	1.98
-10 (+14)	1278	322	374	167	1.16	4.03	7.64	1.93	2.24

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)	300	76	88	92	0.99	0.94	3.28	0.83	0.96
-30 (-22)	402	101	118	106	1.01	1.26	3.80	0.96	1.11
-25 (-13)	544	137	159	121	1.04	1.71	4.47	1.13	1.31
-20 (- 4)	725	183	212	138	1.07	2.28	5.25	1.32	1.54
-15 (+ 5)	946	238	277	156	1.12	2.98	6.05	1.53	1.77
-10 (+14)	1206	304	354	177	1.18	3.81	6.84	1.72	2.00

### 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)	270	68	79	92	1.00	0.85	2.92	0.74	0.86
-30	(-22)	363	91	106	107	1.01	1.14	3.40	0.86	1.00
-25	(-13)	494	125	145	123	1.04	1.55	4.02	1.01	1.18
-20	(- 4)	664	167	195	141	1.08	2.09	4.71	1.19	1.38
-15	(+ 5)	874	220	256	162	1.14	2.75	5.43	1.37	1.59
-10	(+14)	1123	283	329	185	1.21	3.54	6.10	1.54	1.79

### F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	7.84 +0.00/-0.10	[mm]	(0.309" +0.000"/-0.004")
3.1.1 Material	Copper(OD)		
3.1.2 Shape	Slanted 40° 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	6.35 +0.08/-0.08	[mm]	(0.250" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		