COMPRESSOR DEFINITION

Designation	**EM U60CLP**
Nominal Voltage/Frequency	**220 V 60 Hz**
Engineering Number	**513306572**

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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	-	198 to 242 V
8.2 LBP (43ºC Ambient temperature)	Static	-	198 to 242 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm²] (109 psig)	/ ºC - ºF
9.2 Peak (gauge)	9.8	[kgf/cm²] (139 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	9.04	[cm³] (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)	7.39	[kg] (16.29 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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	7M220MC1/8EA17C1/8M220MC1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CP4TMC283N61	
6 Start winding resistance	19.50	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	18.00	[Ω at 25ºC (77ºF)] +/- 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)	1.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.45	[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]
566	143	166	115	0.86	1.78	4.90	1.23	1.44

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)**	342	86	100	81	0.77	1.07	4.20	1.06	1.23
-30	**(-22)**	468	118	137	94	0.80	1.47	4.97	1.25	1.46
-25	**(-13)**	615	155	180	106	0.83	1.93	5.81	1.46	1.70
-20	**(- 4)**	790	199	231	118	0.86	2.48	6.70	1.69	1.96
-15	**(+ 5)**	999	252	293	131	0.90	3.14	7.64	1.93	2.24
-10	**(+14)**	1250	315	366	145	0.94	3.94	8.63	2.18	2.53

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)**	305	77	89	82	0.78	0.96	3.74	0.94	1.10
-30	**(-22)**	423	107	124	95	0.81	1.33	4.44	1.12	1.30
-25	**(-13)**	561	141	164	108	0.84	1.76	5.18	1.30	1.52
-20	**(- 4)**	726	183	213	122	0.88	2.28	5.95	1.50	1.74
-15	**(+ 5)**	925	233	271	137	0.92	2.91	6.77	1.71	1.98
-10	**(+14)**	1166	294	342	153	0.97	3.68	7.61	1.92	2.23

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)**	277	70	81	82	0.78	0.87	3.40	0.86	1.00
-30	**(-22)**	387	97	113	96	0.81	1.21	4.02	1.01	1.18
-25	**(-13)**	516	130	151	110	0.85	1.62	4.67	1.18	1.37
-20	**(- 4)**	672	169	197	126	0.89	2.11	5.34	1.35	1.56
-15	**(+ 5)**	862	217	253	143	0.94	2.71	6.03	1.52	1.77
-10	**(+14)**	1093	275	320	162	1.01	3.45	6.73	1.70	1.97

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)**	257	65	75	81	0.78	0.81	3.17	0.80	0.93
-30	**(-22)**	359	90	105	96	0.81	1.13	3.73	0.94	1.09
-25	**(-13)**	480	121	141	112	0.85	1.51	4.29	1.08	1.26
-20	**(- 4)**	627	158	184	130	0.90	1.97	4.85	1.22	1.42
-15	**(+ 5)**	808	204	237	150	0.97	2.55	5.42	1.36	1.59
-10	**(+14)**	1029	259	302	172	1.05	3.25	5.98	1.51	1.75

F - EXTERNAL CHARACTERISTICS

1 Base plate	New Base Plate EUEM		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +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 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		