

COMPRESSOR DEFINITION

Designation	EM U30CLP
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513306172

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	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	1/10	[hp]
2 Displacement	5.19	[cm ³] (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)	6.31	[kg] (13.91 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	8EA17C1/8EA17E61/QPS2-A22MG1/QPS2-A22MG1 092	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM189KFBYY-53	
6 Start winding resistance	22.80	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	36.95	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	3.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.34	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.44	[A] - Measured according to UL 984
11 Approval boards certification	CE - TUV - UKCA	

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]
332	84	97	80	0.63	1.04	4.16	1.05	1.22

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)	200	50	59	58	0.56	0.63	3.45	0.87	1.01
-30 (-22)	277	70	81	65	0.58	0.87	4.22	1.06	1.24
-25 (-13)	367	93	108	73	0.59	1.15	5.06	1.28	1.48
-20 (- 4)	474	119	139	80	0.60	1.49	5.97	1.51	1.75
-15 (+ 5)	601	151	176	87	0.61	1.89	6.95	1.75	2.04
-10 (+14)	750	189	220	94	0.63	2.37	8.00	2.02	2.34

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)	178	45	52	59	0.57	0.56	3.04	0.77	0.89
-30 (-22)	247	62	72	67	0.59	0.78	3.68	0.93	1.08
-25 (-13)	332	84	97	75	0.61	1.04	4.40	1.11	1.29
-20 (- 4)	434	109	127	83	0.62	1.36	5.18	1.31	1.52
-15 (+ 5)	557	140	163	92	0.63	1.75	6.03	1.52	1.77
-10 (+14)	705	178	207	102	0.66	2.22	6.94	1.75	2.03

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)	164	41	48	59	0.57	0.51	2.80	0.71	0.82
-30 (-22)	225	57	66	67	0.60	0.70	3.33	0.84	0.98
-25 (-13)	301	76	88	76	0.62	0.95	3.93	0.99	1.15
-20 (- 4)	397	100	116	86	0.63	1.25	4.59	1.16	1.35
-15 (+ 5)	516	130	151	97	0.65	1.62	5.31	1.34	1.56
-10 (+14)	660	166	193	108	0.68	2.08	6.09	1.54	1.79

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)	159	40	47	58	0.56	0.50	2.71	0.68	0.79
-30	(-22)	209	53	61	67	0.60	0.65	3.13	0.79	0.92
-25	(-13)	276	70	81	77	0.62	0.87	3.61	0.91	1.06
-20	(- 4)	364	92	107	88	0.64	1.14	4.15	1.05	1.22
-15	(+ 5)	476	120	139	100	0.67	1.50	4.75	1.20	1.39
-10	(+14)	615	155	180	113	0.70	1.94	5.41	1.36	1.58

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		