

COMPRESSOR DEFINITION

Designation	EM 2P30CLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513304623

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 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	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.53	[kg] (16.60 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	8EA14C1/8EA14E62/QPS2-A4R7MG1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	DRB26N61A2	
6 Start winding resistance	11.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	10.04	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	6.70	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.34	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @127V60Hz			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]
335	84	98	71	0.96	1.05	4.70	1.18	1.38

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		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)	207	52	61	47	0.82	0.65	4.45	1.12	1.31
-30 (-22)	279	70	82	53	0.86	0.87	5.26	1.33	1.54
-25 (-13)	366	92	107	60	0.90	1.15	6.07	1.53	1.78
-20 (- 4)	470	118	138	68	0.94	1.48	6.90	1.74	2.02
-15 (+ 5)	597	150	175	77	0.98	1.88	7.80	1.96	2.28
-10 (+14)	751	189	220	86	1.03	2.37	8.77	2.21	2.57

TEST CONDITIONS: @127V60Hz		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)	189	48	55	49	0.83	0.59	3.81	0.96	1.12
-30 (-22)	255	64	75	56	0.88	0.80	4.52	1.14	1.32
-25 (-13)	336	85	99	64	0.92	1.06	5.23	1.32	1.53
-20 (- 4)	436	110	128	73	0.96	1.37	5.97	1.51	1.75
-15 (+ 5)	558	141	163	82	1.01	1.76	6.77	1.71	1.98
-10 (+14)	706	178	207	92	1.07	2.23	7.65	1.93	2.24

TEST CONDITIONS: @127V60Hz		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	52	0.84	0.51	3.15	0.79	0.92
-30 (-22)	225	57	66	60	0.89	0.71	3.78	0.95	1.11
-25 (-13)	301	76	88	68	0.93	0.95	4.43	1.12	1.30
-20 (- 4)	396	100	116	78	0.98	1.24	5.10	1.29	1.49
-15 (+ 5)	513	129	150	88	1.03	1.62	5.83	1.47	1.71
-10 (+14)	657	166	193	99	1.10	2.07	6.65	1.67	1.95

E - PERFORMANCE - CURVES

TEST CONDITIONS: @127V60Hz		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)	132	33	39	54	0.85	0.41	2.44	0.61	0.71
-30	(-22)	189	48	55	62	0.89	0.59	3.03	0.76	0.89
-25	(-13)	261	66	76	72	0.94	0.82	3.64	0.92	1.07
-20	(- 4)	351	88	103	82	0.99	1.10	4.27	1.08	1.25
-15	(+ 5)	464	117	136	93	1.05	1.46	4.96	1.25	1.45
-10	(+14)	604	152	177	105	1.13	1.91	5.74	1.45	1.68

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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 parallel BP+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		