

### COMPRESSOR DEFINITION

Designation	EG AS80CLP
Nominal Voltage/Frequency	220 V 50-60 Hz
Engineering Number	513701422

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220 / 50-60	[ 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	198 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 242 V	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 <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	1/4	[hp]
2 Displacement	11.14	[cm <sup>3</sup> ] (0.680 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	21.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	10.86	[kg] (23.94 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MC1/8EA17C1/8M220MC1/QPS2-A22MG1/QPS2-A22MG	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM283NFBYY-53	
6 Start winding resistance	19.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	14.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	7.90/7.25	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	2.60/2.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	3.00/3.15	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
648	163	190	132	1.14	2.03	4.93	1.24	1.44

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]
827	208	242	152	1.11	2.60	5.44	1.37	1.59

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			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)	378	95	111	89	1.04	1.18	4.21	1.06	1.23
-30 (-22)	503	127	147	102	1.08	1.58	4.92	1.24	1.44
-25 (-13)	659	166	193	114	1.10	2.07	5.83	1.47	1.71
-20 (- 4)	852	215	250	124	1.11	2.68	6.89	1.74	2.02
-15 (+ 5)	1089	274	319	135	1.13	3.43	8.06	2.03	2.36
-10 (+14)	1378	347	404	148	1.15	4.35	9.29	2.34	2.72

TEST CONDITIONS: @220V50Hz			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)	346	87	101	92	1.05	1.08	3.76	0.95	1.10
-30 (-22)	469	118	137	107	1.09	1.47	4.36	1.10	1.28
-25 (-13)	621	157	182	121	1.12	1.95	5.14	1.30	1.51
-20 (- 4)	810	204	237	134	1.14	2.54	6.06	1.53	1.77
-15 (+ 5)	1043	263	306	147	1.16	3.28	7.07	1.78	2.07
-10 (+14)	1326	334	389	163	1.19	4.18	8.13	2.05	2.38

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	319	80	93	94	1.06	1.00	3.40	0.86	1.00	
-30 (-22)	436	110	128	111	1.10	1.37	3.91	0.99	1.15	
-25 (-13)	581	147	170	126	1.13	1.82	4.58	1.15	1.34	
-20 (- 4)	763	192	224	142	1.16	2.40	5.37	1.35	1.57	
-15 (+ 5)	987	249	289	158	1.19	3.11	6.24	1.57	1.83	
-10 (+14)	1261	318	370	177	1.24	3.98	7.13	1.80	2.09	

TEST CONDITIONS: @220V50Hz		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)	295	74	87	95	1.04	0.92	3.11	0.78	0.91	
-30 (-22)	403	102	118	114	1.09	1.26	3.53	0.89	1.03	
-25 (-13)	539	136	158	131	1.13	1.69	4.10	1.03	1.20	
-20 (- 4)	709	179	208	149	1.17	2.23	4.78	1.20	1.40	
-15 (+ 5)	922	232	270	168	1.21	2.90	5.51	1.39	1.61	
-10 (+14)	1183	298	347	190	1.27	3.74	6.26	1.58	1.83	

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)	476	120	139	99	0.90	1.49	4.82	1.22	1.41	
-30 (-22)	626	158	183	113	0.93	1.96	5.55	1.40	1.63	
-25 (-13)	803	202	235	127	0.97	2.52	6.36	1.60	1.86	
-20 (- 4)	1016	256	298	140	1.01	3.19	7.25	1.83	2.13	
-15 (+ 5)	1274	321	373	154	1.05	4.01	8.25	2.08	2.42	
-10 (+14)	1587	400	465	169	1.10	5.01	9.35	2.36	2.74	

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)	465	117	136	104	0.91	1.46	4.47	1.13	1.31	
-30 (-22)	619	156	181	121	0.95	1.94	5.13	1.29	1.50	
-25 (-13)	795	200	233	136	1.00	2.49	5.84	1.47	1.71	
-20 (- 4)	1005	253	294	152	1.05	3.16	6.60	1.66	1.93	
-15 (+ 5)	1256	316	368	169	1.10	3.95	7.43	1.87	2.18	
-10 (+14)	1558	393	457	187	1.16	4.92	8.33	2.10	2.44	

### E - PERFORMANCE - CURVES

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)	425	107	125	104	0.91	1.33	4.10	1.03	1.20
-30	(-22)	587	148	172	124	0.96	1.84	4.72	1.19	1.38
-25	(-13)	769	194	225	143	1.02	2.41	5.36	1.35	1.57
-20	(- 4)	980	247	287	163	1.08	3.08	6.02	1.52	1.76
-15	(+ 5)	1229	310	360	183	1.15	3.87	6.71	1.69	1.97
-10	(+14)	1526	385	447	205	1.23	4.82	7.44	1.87	2.18

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)	356	90	104	97	0.90	1.11	3.66	0.92	1.07
-30	(-22)	532	134	156	123	0.96	1.67	4.29	1.08	1.26
-25	(-13)	724	182	212	147	1.03	2.27	4.89	1.23	1.43
-20	(- 4)	942	237	276	172	1.11	2.96	5.47	1.38	1.60
-15	(+ 5)	1195	301	350	198	1.20	3.76	6.06	1.53	1.78
-10	(+14)	1492	376	437	225	1.30	4.71	6.65	1.68	1.95

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
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	Straight		
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	Straight		
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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		