

COMPRESSOR DEFINITION

Designation	EG 80CLP
Nominal Voltage/Frequency	220 V 50-60 Hz
Engineering Number	513700178

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-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°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	187 to 242 V	187 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	187 to 242 V	187 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	12.21	[cm ³] (0.745 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	23.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO10	
4 Weight (with oil charge)	11.12	[kg] (24.51 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	7M220MC1/8EA17C1/8EA5B1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM276RFBYY-53	
6 Start winding resistance	21.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	8.85	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	10.00/9.20	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.90/1.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IRAM	

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]
673	170	197	144	1.23	2.11	4.68	1.18	1.37

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]
810	204	237	168	1.16	2.54	4.82	1.21	1.41

E - PERFORMANCE - CURVES

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)	373	94	109	103	1.13	1.17	3.63	0.91	1.06
-30	(-22)	514	130	151	116	1.16	1.61	4.43	1.12	1.30
-25	(-13)	681	172	200	131	1.19	2.14	5.21	1.31	1.53
-20	(- 4)	880	222	258	147	1.23	2.77	5.99	1.51	1.76
-15	(+ 5)	1119	282	328	164	1.27	3.52	6.81	1.72	2.00
-10	(+14)	1404	354	411	182	1.32	4.43	7.69	1.94	2.25
-5	(+23)	1741	439	510	201	1.38	5.50	8.65	2.18	2.53

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)	320	81	94	102	1.12	1.00	3.15	0.79	0.92
-30	(-22)	461	116	135	118	1.15	1.45	3.91	0.99	1.15
-25	(-13)	627	158	184	135	1.19	1.97	4.64	1.17	1.36
-20	(- 4)	823	207	241	154	1.24	2.59	5.35	1.35	1.57
-15	(+ 5)	1056	266	310	173	1.30	3.33	6.08	1.53	1.78
-10	(+14)	1334	336	391	195	1.36	4.21	6.85	1.73	2.01
-5	(+23)	1663	419	487	217	1.43	5.26	7.68	1.94	2.25

E - PERFORMANCE - CURVES

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]
-35	(-31)	282	71	83	100	1.11	0.88	2.80	0.70	0.82
-30	(-22)	418	105	122	118	1.15	1.31	3.53	0.89	1.03
-25	(-13)	575	145	169	137	1.20	1.81	4.20	1.06	1.23
-20	(- 4)	762	192	223	158	1.25	2.40	4.84	1.22	1.42
-15	(+ 5)	985	248	289	180	1.31	3.10	5.49	1.38	1.61
-10	(+14)	1250	315	366	203	1.39	3.94	6.15	1.55	1.80
-5	(+23)	1565	394	459	228	1.47	4.95	6.86	1.73	2.01

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]
-35	(-31)	430	108	126	115	1.00	1.34	3.74	0.94	1.10
-30	(-22)	599	151	176	133	1.05	1.88	4.51	1.14	1.32
-25	(-13)	796	201	233	152	1.10	2.50	5.26	1.32	1.54
-20	(- 4)	1029	259	301	171	1.17	3.23	6.01	1.51	1.76
-15	(+ 5)	1308	330	383	192	1.24	4.12	6.78	1.71	1.99
-10	(+14)	1642	414	481	215	1.32	5.18	7.62	1.92	2.23
-5	(+23)	2040	514	598	239	1.41	6.45	8.54	2.15	2.50

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]
-35	(-31)	379	95	111	112	0.99	1.19	3.39	0.85	0.99
-30	(-22)	553	139	162	134	1.06	1.73	4.10	1.03	1.20
-25	(-13)	750	189	220	157	1.13	2.35	4.78	1.20	1.40
-20	(- 4)	980	247	287	181	1.20	3.08	5.44	1.37	1.59
-15	(+ 5)	1252	315	367	205	1.29	3.94	6.11	1.54	1.79
-10	(+14)	1574	397	461	230	1.38	4.97	6.83	1.72	2.00
-5	(+23)	1957	493	574	257	1.49	6.19	7.61	1.92	2.23

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)	316	80	93	103	0.97	0.99	3.08	0.78	0.90
-30	(-22)	497	125	146	131	1.05	1.56	3.74	0.94	1.10
-25	(-13)	697	176	204	159	1.13	2.19	4.36	1.10	1.28
-20	(- 4)	925	233	271	187	1.22	2.91	4.94	1.25	1.45
-15	(+ 5)	1192	300	349	216	1.32	3.75	5.53	1.39	1.62
-10	(+14)	1505	379	441	245	1.43	4.75	6.14	1.55	1.80
-5	(+23)	1875	472	549	276	1.56	5.93	6.80	1.71	1.99

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal 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 plated steel		
3.1.2 Shape	Slanted		
3.2 DISCHARGE	5 +0.18/-0.06	[mm]	(0.197" +0.007"/-0.002")
3.2.1 Material	Copper plated steel		
3.2.2 Shape	Slanted		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper plated steel		
3.3.2 Shape	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		