

COMPRESSOR DEFINITION

Designation	EG ZS90CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513701139

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220-240 / 50	[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	RSCR		
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 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 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		[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	ALQUILB / ISO5	
4 Weight (with oil charge)	10.97	[kg] (24.18 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MD3/8EA17C3/8M220MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(270)/4(270)	[µF(VAC minimum)]
5 Motor protection	4TM283KFBYY-53	
6 Start winding resistance	18.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	7.60/6.70	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.13/1.02	[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 - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			CECOMAFLBP Static		Evaporating temperature (Condensing temperature		-25°C (-13°F) 55°C (131°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]
557	140	163	119	0.58	2.12	4.70	1.18	1.38

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	409	103	120	77	0.48	1.31	5.27	1.33	1.55
-30	(-22)	534	134	156	90	0.51	1.71	5.94	1.50	1.74
-25	(-13)	698	176	204	103	0.56	2.24	6.82	1.72	2.00
-20	(- 4)	905	228	265	115	0.62	2.91	7.87	1.98	2.31
-15	(+ 5)	1158	292	339	127	0.68	3.73	9.06	2.28	2.66
-10	(+14)	1463	369	429	141	0.74	4.72	10.35	2.61	3.03

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	374	94	110	84	0.48	1.30	4.44	1.12	1.30
-30	(-22)	484	122	142	98	0.52	1.68	4.95	1.25	1.45
-25	(-13)	627	158	184	111	0.57	2.18	5.64	1.42	1.65
-20	(- 4)	807	203	236	124	0.64	2.81	6.49	1.63	1.90
-15	(+ 5)	1028	259	301	138	0.71	3.59	7.44	1.87	2.18
-10	(+14)	1293	326	379	153	0.78	4.52	8.45	2.13	2.48

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	327	83	96	87	0.50	1.24	3.75	0.95	1.10
-30	(-22)	427	108	125	103	0.53	1.62	4.15	1.04	1.21
-25	(-13)	553	139	162	118	0.59	2.11	4.70	1.18	1.38
-20	(- 4)	711	179	208	132	0.67	2.72	5.37	1.35	1.57
-15	(+ 5)	904	228	265	148	0.75	3.46	6.12	1.54	1.79
-10	(+14)	1135	286	333	165	0.83	4.36	6.91	1.74	2.03

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	269	68	79	86	0.52	1.14	3.14	0.79	0.92
-30	(-22)	363	91	106	104	0.56	1.53	3.45	0.87	1.01
-25	(-13)	478	120	140	121	0.62	2.02	3.91	0.98	1.14
-20	(- 4)	618	156	181	139	0.70	2.62	4.45	1.12	1.30
-15	(+ 5)	788	199	231	157	0.79	3.35	5.04	1.27	1.48
-10	(+14)	990	249	290	176	0.89	4.22	5.65	1.42	1.65

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted		
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		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		