

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			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]
735	185	215	123	0.61	2.31	5.96	1.50	1.75

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)	418	105	123	77	0.48	1.31	5.40	1.36	1.58
-30	(-22)	546	138	160	90	0.51	1.71	6.06	1.53	1.78
-25	(-13)	714	180	209	103	0.56	2.24	6.96	1.75	2.04
-20	(- 4)	925	233	271	115	0.62	2.91	8.05	2.03	2.36
-15	(+ 5)	1184	298	347	127	0.68	3.73	9.27	2.34	2.72
-10	(+14)	1496	377	438	141	0.74	4.72	10.59	2.67	3.10

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)	415	105	122	84	0.48	1.30	4.93	1.24	1.44
-30	(-22)	537	135	157	98	0.52	1.68	5.49	1.38	1.61
-25	(-13)	696	175	204	111	0.57	2.18	6.26	1.58	1.84
-20	(- 4)	896	226	262	124	0.64	2.81	7.20	1.81	2.11
-15	(+ 5)	1140	287	334	138	0.71	3.59	8.26	2.08	2.42
-10	(+14)	1434	361	420	153	0.78	4.52	9.38	2.36	2.75

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)	397	100	116	87	0.50	1.24	4.55	1.15	1.33
-30	(-22)	518	130	152	103	0.53	1.62	5.04	1.27	1.48
-25	(-13)	672	169	197	118	0.59	2.11	5.72	1.44	1.67
-20	(- 4)	865	218	253	132	0.67	2.72	6.53	1.65	1.91
-15	(+ 5)	1100	277	322	148	0.75	3.46	7.44	1.88	2.18
-10	(+14)	1381	348	405	165	0.83	4.36	8.41	2.12	2.46

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]	[W/W]
-35	(-31)	363	92	106	86	0.52	1.14	4.22	1.06	1.24
-30	(-22)	488	123	143	104	0.56	1.53	4.66	1.18	1.37
-25	(-13)	643	162	188	121	0.62	2.02	5.27	1.33	1.54
-20	(- 4)	833	210	244	139	0.70	2.62	5.99	1.51	1.76
-15	(+ 5)	1063	268	311	157	0.79	3.35	6.79	1.71	1.99
-10	(+14)	1337	337	392	176	0.89	4.22	7.61	1.92	2.23

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		