

COMPRESSOR DEFINITION

Designation	EG Z90HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513700111

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
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 pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4+	[hp]
2 Displacement	7.55	[cm ³] (0.461 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	19.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	11.52	[kg] (25.40 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

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	7M4R7MC1/8EA14C1/8EA1B1/8EA21C1/8EA3B1/8EA4B1/8M4I	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM437NFBYY-53	
6 Start winding resistance	6.05	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.95	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	15.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
945	238	277	170	2.24	5.37	5.55	1.40	1.63

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	497	125	146	113	1.45	2.81	4.39	1.11	1.29
-30 (-22)	660	166	193	131	1.70	3.74	5.05	1.27	1.48
-25 (-13)	873	220	256	152	1.97	4.95	5.76	1.45	1.69
-20 (- 4)	1144	288	335	175	2.26	6.51	6.54	1.65	1.92
-15 (+ 5)	1482	373	434	200	2.58	8.46	7.39	1.86	2.17
-10 (+14)	1894	477	555	227	2.92	10.85	8.32	2.10	2.44

TEST CONDITIONS: @115V60Hz			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)	455	115	133	112	1.47	2.58	4.09	1.03	1.20
-30 (-22)	627	158	184	136	1.75	3.56	4.62	1.16	1.35
-25 (-13)	841	212	247	162	2.07	4.78	5.20	1.31	1.52
-20 (- 4)	1105	279	324	190	2.42	6.29	5.82	1.47	1.71
-15 (+ 5)	1427	360	418	220	2.81	8.15	6.50	1.64	1.90
-10 (+14)	1816	458	532	251	3.22	10.40	7.23	1.82	2.12

TEST CONDITIONS: @115V60Hz			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)	372	94	109	99	1.44	2.10	3.74	0.94	1.10
-30 (-22)	552	139	162	131	1.76	3.13	4.19	1.06	1.23
-25 (-13)	767	193	225	163	2.12	4.35	4.67	1.18	1.37
-20 (- 4)	1023	258	300	197	2.52	5.82	5.18	1.31	1.52
-15 (+ 5)	1329	335	389	233	2.97	7.58	5.72	1.44	1.68
-10 (+14)	1693	427	496	269	3.45	9.70	6.30	1.59	1.85

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F		
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	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-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		