

COMPRESSOR DEFINITION

Designation	EG Z80HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513700210

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	6.76	[cm ³] (0.413 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	17.000	
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)	11.54	[kg] (25.44 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	4TM445KFBYY-53	
6 Start winding resistance	5.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	3.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	13.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.10	[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]
850	214	249	153	1.88	4.83	5.56	1.40	1.63

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	511	129	150	115	1.17	2.89	4.40	1.11	1.29
-30	(-22)	685	173	201	131	1.40	3.88	5.28	1.33	1.55
-25	(-13)	889	224	261	143	1.58	5.05	6.29	1.58	1.84
-20	(- 4)	1134	286	332	154	1.75	6.45	7.42	1.87	2.17
-15	(+ 5)	1429	360	419	164	1.92	8.16	8.66	2.18	2.54
-10	(+14)	1784	449	523	177	2.12	10.22	9.98	2.52	2.93

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)	455	115	133	105	1.32	2.57	4.39	1.11	1.29
-30	(-22)	642	162	188	125	1.55	3.64	5.18	1.31	1.52
-25	(-13)	856	216	251	142	1.75	4.86	6.04	1.52	1.77
-20	(- 4)	1105	278	324	158	1.95	6.29	6.96	1.75	2.04
-15	(+ 5)	1399	353	410	175	2.15	7.99	7.92	1.99	2.32
-10	(+14)	1750	441	513	194	2.40	10.03	8.89	2.24	2.61

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)	357	90	105	93	1.24	2.02	3.86	0.97	1.13
-30	(-22)	556	140	163	120	1.52	3.15	4.63	1.17	1.36
-25	(-13)	778	196	228	144	1.79	4.41	5.41	1.36	1.58
-20	(- 4)	1030	260	302	167	2.05	5.86	6.16	1.55	1.81
-15	(+ 5)	1324	334	388	192	2.34	7.56	6.89	1.74	2.02
-10	(+14)	1669	421	489	220	2.68	9.56	7.57	1.91	2.22

E - PERFORMANCE - CURVES

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)	243	61	71	77	1.03	1.37	3.12	0.79	0.91
-30	(-22)	454	114	133	112	1.41	2.57	3.92	0.99	1.15
-25	(-13)	682	172	200	144	1.78	3.87	4.66	1.17	1.37
-20	(- 4)	937	236	275	177	2.16	5.33	5.31	1.34	1.56
-15	(+ 5)	1229	310	360	212	2.58	7.01	5.87	1.48	1.72
-10	(+14)	1568	395	459	251	3.06	8.98	6.31	1.59	1.85

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		
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	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		