

COMPRESSOR DEFINITION

Designation	EG Z80HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513700189

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	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	85 to 110 V	98 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	85 to 110 V	98 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	TSD	
2.1 Starting device	TSD- 115V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[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)	1.70	[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]
850	214	249	141	1.30	4.83	6.01	1.51	1.76

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	107	0.82	2.89	4.74	1.19	1.39	
-30 (-22)	685	173	201	119	0.95	3.88	5.78	1.46	1.69	
-25 (-13)	889	224	261	130	1.07	5.05	6.87	1.73	2.01	
-20 (- 4)	1134	286	332	141	1.20	6.45	8.04	2.03	2.36	
-15 (+ 5)	1429	360	419	153	1.34	8.16	9.31	2.35	2.73	
-10 (+14)	1784	449	523	166	1.49	10.22	10.69	2.70	3.13	

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	96	0.91	2.57	4.75	1.20	1.39	
-30 (-22)	642	162	188	114	1.06	3.64	5.65	1.42	1.66	
-25 (-13)	856	216	251	131	1.20	4.86	6.56	1.65	1.92	
-20 (- 4)	1105	278	324	147	1.35	6.29	7.49	1.89	2.20	
-15 (+ 5)	1399	353	410	164	1.51	7.99	8.47	2.13	2.48	
-10 (+14)	1750	441	513	183	1.68	10.03	9.51	2.40	2.79	

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	86	0.86	2.02	4.16	1.05	1.22	
-30 (-22)	556	140	163	111	1.05	3.15	5.02	1.26	1.47	
-25 (-13)	778	196	228	134	1.24	4.41	5.83	1.47	1.71	
-20 (- 4)	1030	260	302	157	1.44	5.86	6.61	1.67	1.94	
-15 (+ 5)	1324	334	388	180	1.64	7.56	7.38	1.86	2.16	
-10 (+14)	1669	421	489	204	1.85	9.56	8.17	2.06	2.39	

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	73	0.73	1.37	3.31	0.83	0.97
-30	(-22)	454	114	133	104	0.99	2.57	4.20	1.06	1.23
-25	(-13)	682	172	200	135	1.24	3.87	5.00	1.26	1.47
-20	(- 4)	937	236	275	164	1.50	5.33	5.72	1.44	1.68
-15	(+ 5)	1229	310	360	194	1.77	7.01	6.38	1.61	1.87
-10	(+14)	1568	395	459	225	2.05	8.98	7.00	1.76	2.05

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
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	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		