

### 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 <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	6.76	[cm <sup>3</sup> ] (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 / ISO7	
4 Weight (with oil charge)	11.54	[kg] (25.44 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (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	Combo	
2.1 Starting device	5SP04X445K/5SP14X445K	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	15(180)	[µF(VAC minimum)]
5 Motor protection	5SP14X445KFX	
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)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[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	143	1.23	4.83	5.96	1.50	1.75

### 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	109	0.78	2.89	4.64	1.17	1.36	
-30 (-22)	685	173	201	122	0.91	3.88	5.65	1.42	1.66	
-25 (-13)	889	224	261	133	1.03	5.05	6.76	1.70	1.98	
-20 (- 4)	1134	286	332	143	1.15	6.45	7.97	2.01	2.34	
-15 (+ 5)	1429	360	419	153	1.27	8.16	9.29	2.34	2.72	
-10 (+14)	1784	449	523	165	1.40	10.22	10.71	2.70	3.14	

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	99	0.88	2.57	4.61	1.16	1.35	
-30 (-22)	642	162	188	117	1.02	3.64	5.52	1.39	1.62	
-25 (-13)	856	216	251	133	1.15	4.86	6.47	1.63	1.90	
-20 (- 4)	1105	278	324	148	1.28	6.29	7.45	1.88	2.18	
-15 (+ 5)	1399	353	410	164	1.42	7.99	8.48	2.14	2.48	
-10 (+14)	1750	441	513	181	1.57	10.03	9.55	2.41	2.80	

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	89	0.84	2.02	4.02	1.01	1.18	
-30 (-22)	556	140	163	113	1.01	3.15	4.91	1.24	1.44	
-25 (-13)	778	196	228	135	1.18	4.41	5.77	1.45	1.69	
-20 (- 4)	1030	260	302	157	1.35	5.86	6.60	1.66	1.93	
-15 (+ 5)	1324	334	388	179	1.54	7.56	7.41	1.87	2.17	
-10 (+14)	1669	421	489	204	1.74	9.56	8.20	2.07	2.40	

### 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	75	0.71	1.37	3.18	0.80	0.93
-30	(-22)	454	114	133	106	0.94	2.57	4.12	1.04	1.21
-25	(-13)	682	172	200	136	1.18	3.87	4.96	1.25	1.45
-20	(- 4)	937	236	275	165	1.42	5.33	5.71	1.44	1.67
-15	(+ 5)	1229	310	360	195	1.67	7.01	6.37	1.61	1.87
-10	(+14)	1568	395	459	227	1.95	8.98	6.95	1.75	2.04

### 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		