

### COMPRESSOR DEFINITION

Designation	EG ZS70HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513701346

### 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	-	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 temperature			
9.1 Operating	14.2	[kgf/cm <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	5.56	[cm <sup>3</sup> ] (0.339 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	230	[ml] (7.78 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	10.1	[kg] (22.27 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	TSD	
2.1 Starting device	TSD2-115V/TSD2-115V0.6	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(183)/15(187)/20(192)	[µF(VAC minimum)]
5 Motor protection	4TM319NFBYY-53	
6 Start winding resistance	7.72	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	6.05	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	11.70	[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	CE - NOM - UKCA - 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]	
674	170	197	120	1.09	3.83	5.62	1.42	1.65	

### 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)	560	141	164	91	0.84	3.17	6.09	1.54	1.79
-30	(-22)	632	159	185	100	0.92	3.58	6.38	1.61	1.87
-25	(-13)	762	192	223	110	1.00	4.33	6.98	1.76	2.05
-20	(- 4)	943	238	276	121	1.09	5.37	7.84	1.97	2.30
-15	(+ 5)	1170	295	343	132	1.19	6.68	8.89	2.24	2.60
-10	(+14)	1436	362	421	143	1.29	8.23	10.07	2.54	2.95

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)	424	107	124	86	0.80	2.40	4.98	1.26	1.46
-30	(-22)	526	133	154	98	0.90	2.98	5.39	1.36	1.58
-25	(-13)	686	173	201	113	1.02	3.90	6.06	1.53	1.77
-20	(- 4)	899	227	263	129	1.16	5.12	6.91	1.74	2.03
-15	(+ 5)	1158	292	339	146	1.30	6.61	7.90	1.99	2.32
-10	(+14)	1457	367	427	163	1.45	8.35	8.97	2.26	2.63

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)	311	78	91	77	0.72	1.76	4.11	1.04	1.20
-30	(-22)	422	106	124	93	0.86	2.39	4.60	1.16	1.35
-25	(-13)	593	149	174	111	1.02	3.37	5.27	1.33	1.55
-20	(- 4)	817	206	239	133	1.19	4.65	6.09	1.53	1.78
-15	(+ 5)	1088	274	319	155	1.38	6.21	6.97	1.76	2.04
-10	(+14)	1400	353	410	178	1.58	8.02	7.87	1.98	2.31

### 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)	221	56	65	64	0.62	1.25	3.40	0.86	1.00
-30	(-22)	321	81	94	84	0.79	1.82	3.92	0.99	1.15
-25	(-13)	482	121	141	107	0.98	2.73	4.57	1.15	1.34
-20	(- 4)	696	175	204	132	1.20	3.96	5.29	1.33	1.55
-15	(+ 5)	958	241	281	160	1.43	5.47	6.03	1.52	1.77
-10	(+14)	1263	318	370	189	1.68	7.23	6.72	1.69	1.97

### 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	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		