

COMPRESSOR DEFINITION

Designation	EG Z70HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513700270

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	5.96	[cm ³] (0.364 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	15.000	
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)	11.53	[kg] (25.42 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	8EA14C1/8EA1B1/8EA21C1/8EA3B1/8EA4B1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM319RFBYY-53	
6 Start winding resistance	6.25	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	10.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.80	[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]
724	182	212	130	1.57	4.11	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)	427	107	125	85	1.01	2.41	4.98	1.25	1.46
-30 (-22)	584	147	171	103	1.16	3.31	5.73	1.44	1.68
-25 (-13)	772	195	226	118	1.31	4.38	6.61	1.67	1.94
-20 (- 4)	996	251	292	132	1.47	5.67	7.60	1.91	2.23
-15 (+ 5)	1261	318	369	145	1.63	7.20	8.69	2.19	2.55
-10 (+14)	1572	396	461	158	1.81	9.01	9.86	2.49	2.89

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)	361	91	106	82	1.05	2.05	4.38	1.10	1.28
-30 (-22)	523	132	153	101	1.24	2.97	5.18	1.30	1.52
-25 (-13)	713	180	209	119	1.43	4.05	6.03	1.52	1.77
-20 (- 4)	937	236	275	135	1.64	5.33	6.92	1.74	2.03
-15 (+ 5)	1199	302	351	152	1.85	6.85	7.84	1.98	2.30
-10 (+14)	1505	379	441	171	2.09	8.62	8.77	2.21	2.57

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)	264	67	77	76	0.97	1.49	3.48	0.88	1.02
-30 (-22)	431	109	126	99	1.20	2.44	4.35	1.10	1.27
-25 (-13)	624	157	183	120	1.44	3.54	5.19	1.31	1.52
-20 (- 4)	849	214	249	141	1.71	4.83	6.01	1.51	1.76
-15 (+ 5)	1109	279	325	164	2.00	6.33	6.77	1.71	1.98
-10 (+14)	1411	356	413	189	2.31	8.08	7.48	1.88	2.19

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)	169	43	49	62	0.80	0.95	2.75	0.69	0.80
-30	(-22)	342	86	100	89	1.10	1.94	3.70	0.93	1.08
-25	(-13)	538	136	158	116	1.41	3.06	4.56	1.15	1.34
-20	(- 4)	764	193	224	144	1.75	4.35	5.32	1.34	1.56
-15	(+ 5)	1024	258	300	174	2.12	5.84	5.95	1.50	1.74
-10	(+14)	1322	333	387	207	2.53	7.58	6.45	1.62	1.89

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	Yes		
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		