

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	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	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	8EA14C3/8EA1B3/8EA21C3/8EA3B3/8EA4B3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[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)	1.60	[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	123	1.07	4.11	5.91	1.49	1.73

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	82	0.71	2.41	5.17	1.30	1.52
-30	(-22)	584	147	171	97	0.79	3.31	6.07	1.53	1.78
-25	(-13)	772	195	226	110	0.89	4.38	7.03	1.77	2.06
-20	(- 4)	996	251	292	123	1.00	5.67	8.08	2.04	2.37
-15	(+ 5)	1261	318	369	136	1.12	7.20	9.23	2.33	2.70
-10	(+14)	1572	396	461	149	1.23	9.01	10.49	2.64	3.07

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	79	0.73	2.05	4.55	1.15	1.33
-30	(-22)	523	132	153	96	0.84	2.97	5.47	1.38	1.60
-25	(-13)	713	180	209	112	0.97	4.05	6.40	1.61	1.87
-20	(- 4)	937	236	275	128	1.12	5.33	7.34	1.85	2.15
-15	(+ 5)	1199	302	351	144	1.27	6.85	8.33	2.10	2.44
-10	(+14)	1505	379	441	160	1.42	8.62	9.37	2.36	2.75

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	74	0.67	1.49	3.60	0.91	1.05
-30	(-22)	431	109	126	94	0.82	2.44	4.57	1.15	1.34
-25	(-13)	624	157	183	114	0.99	3.54	5.50	1.39	1.61
-20	(- 4)	849	214	249	133	1.17	4.83	6.38	1.61	1.87
-15	(+ 5)	1109	279	325	154	1.36	6.33	7.23	1.82	2.12
-10	(+14)	1411	356	413	175	1.55	8.08	8.07	2.03	2.36

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	0.57	0.95	2.79	0.70	0.82
-30	(-22)	342	86	100	86	0.76	1.94	3.86	0.97	1.13
-25	(-13)	538	136	158	110	0.97	3.06	4.80	1.21	1.41
-20	(- 4)	764	193	224	135	1.19	4.35	5.65	1.42	1.65
-15	(+ 5)	1024	258	300	161	1.42	5.84	6.40	1.61	1.87
-10	(+14)	1322	333	387	188	1.66	7.58	7.07	1.78	2.07

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		