

COMPRESSOR DEFINITION

Designation	EM Z60CLT
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513301754

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
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)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	0.13	[hp]
2 Displacement	9.50	[cm ³] (0.580 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	21.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.6	[kg] (16.75 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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/TSD2.1 - 115V 0	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	4TM319NFBYY-53	
6 Start winding resistance	7.66	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.28	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	11.58	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.68	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.71	[A] - Measured according to UL 984
11 Approval boards certification		

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]
663	167	194	108	0.98	2.08	6.14	1.55	1.80

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)	411	104	120	74	0.61	1.29	5.57	1.40	1.63
-30	(-22)	540	136	158	85	0.68	1.69	6.38	1.61	1.87
-25	(-13)	703	177	206	97	0.77	2.21	7.24	1.83	2.12
-20	(- 4)	899	227	263	110	0.87	2.82	8.15	2.05	2.39
-15	(+ 5)	1129	285	331	124	0.97	3.55	9.09	2.29	2.66
-10	(+14)	1394	351	408	139	1.09	4.40	10.08	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)	381	96	112	75	0.62	1.19	5.06	1.28	1.48
-30	(-22)	502	127	147	87	0.71	1.57	5.78	1.46	1.69
-25	(-13)	659	166	193	101	0.81	2.07	6.53	1.64	1.91
-20	(- 4)	850	214	249	116	0.93	2.67	7.30	1.84	2.14
-15	(+ 5)	1078	272	316	133	1.06	3.39	8.10	2.04	2.37
-10	(+14)	1342	338	393	150	1.20	4.23	8.93	2.25	2.62

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)	348	88	102	76	0.62	1.09	4.62	1.16	1.35
-30	(-22)	462	116	135	88	0.72	1.45	5.26	1.33	1.54
-25	(-13)	612	154	179	103	0.83	1.92	5.92	1.49	1.74
-20	(- 4)	800	202	234	121	0.97	2.51	6.60	1.66	1.93
-15	(+ 5)	1026	258	301	141	1.12	3.23	7.28	1.83	2.13
-10	(+14)	1290	325	378	162	1.28	4.07	7.96	2.01	2.33

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)	312	79	91	74	0.62	0.98	4.20	1.06	1.23
-30	(-22)	418	105	122	88	0.73	1.31	4.80	1.21	1.41
-25	(-13)	563	142	165	105	0.86	1.77	5.39	1.36	1.58
-20	(- 4)	748	188	219	125	1.01	2.35	5.99	1.51	1.75
-15	(+ 5)	972	245	285	148	1.19	3.06	6.57	1.66	1.93
-10	(+14)	1236	312	362	173	1.37	3.90	7.15	1.80	2.10

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 43° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		