COMPRESSOR DEFINITION

Designation	**EM 3Z60HLT**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513300669**

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-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°F)	
5 Motor type	RSCR		
6 Starting torque	LST - Low Starting Torque		
7 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	-	103 to 140 V
8.2 LBP (43ºC Ambient temperature)	Static	-	103 to 140 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm²] (202 psig)	/ ºC - ºF
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	5.19	[cm³] (0.317 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.5	[kg] (16.53 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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/TSD2-115V/TSD2-115V0.6	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)/15(180)	[µF(VAC minimum)]
5 Motor protection	4TM427KFBYY-53	
6 Start winding resistance	9.32	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	5.55	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	11.72	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.62	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.24	[A] - Measured according to UL 984
11 Approval boards certification	CCC - 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]
648	163	190	108	0.97	3.68	6.01	1.51	1.76

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@115V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **35ºC (+95ºF))**

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)**	387	97	113	72	0.64	2.19	5.40	1.36	1.58
-30	**(-22)**	511	129	150	82	0.72	2.90	6.25	1.57	1.83
-25	**(-13)**	658	166	193	92	0.81	3.74	7.19	1.81	2.11
-20	**(- 4)**	838	211	246	102	0.90	4.77	8.23	2.07	2.41
-15	**(+ 5)**	1059	267	310	112	0.99	6.05	9.35	2.36	2.74
-10	**(+14)**	1332	336	390	125	1.11	7.63	10.56	2.66	3.09
-5	**(+23)**	1666	420	488	141	1.25	9.58	11.84	2.98	3.47

TEST CONDITIONS: **@115V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **45ºC (+113ºF))**

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)**	349	88	102	72	0.65	1.97	4.83	1.22	1.41
-30	**(-22)**	478	121	140	86	0.77	2.71	5.59	1.41	1.64
-25	**(-13)**	626	158	183	98	0.87	3.55	6.41	1.62	1.88
-20	**(- 4)**	801	202	235	110	0.98	4.56	7.29	1.84	2.14
-15	**(+ 5)**	1014	256	297	123	1.10	5.79	8.21	2.07	2.41
-10	**(+14)**	1274	321	373	138	1.24	7.30	9.18	2.31	2.69
-5	**(+23)**	1591	401	466	156	1.39	9.15	10.18	2.57	2.98

TEST CONDITIONS: **@115V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **55ºC (+131ºF))**

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)**	295	74	86	69	0.62	1.67	4.21	1.06	1.23
-30	**(-22)**	434	109	127	87	0.77	2.46	4.94	1.25	1.45
-25	**(-13)**	587	148	172	103	0.91	3.33	5.70	1.44	1.67
-20	**(- 4)**	763	192	224	119	1.05	4.34	6.47	1.63	1.90
-15	**(+ 5)**	973	245	285	135	1.20	5.55	7.25	1.83	2.12
-10	**(+14)**	1225	309	359	153	1.36	7.02	8.03	2.02	2.35
-5	**(+23)**	1529	385	448	173	1.54	8.79	8.82	2.22	2.58

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@115V60Hz **Static**

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)**	201	51	59	59	0.53	1.14	3.47	0.87	1.02
-30	**(-22)**	355	89	104	82	0.72	2.01	4.23	1.07	1.24
-25	**(-13)**	518	131	152	103	0.91	2.94	4.97	1.25	1.46
-20	**(- 4)**	700	176	205	123	1.09	3.98	5.69	1.43	1.67
-15	**(+ 5)**	911	230	267	144	1.27	5.20	6.38	1.61	1.87
-10	**(+14)**	1160	292	340	165	1.47	6.64	7.04	1.78	2.06
-5	**(+23)**	1456	367	427	190	1.69	8.38	7.67	1.93	2.25

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-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		