

COMPRESSOR DEFINITION

Designation	EM Y3115Z
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	171AA77

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°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)	-	-	-
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	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	6.09	[cm ³] (0.372 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	17.600	
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)	7.6	[kg] (16.75 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	V230	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	AE19BU8	
6 Start winding resistance	16.25	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	17.60	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
555	140	163	117	0.90	3.15	4.74	1.19	1.39

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			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)	304	77	89	80	0.84	1.72	3.83	0.97	1.12
-30	(-22)	448	113	131	94	0.86	2.54	4.76	1.20	1.39
-25	(-13)	610	154	179	107	0.88	3.46	5.69	1.43	1.67
-20	(- 4)	797	201	233	120	0.91	4.53	6.65	1.68	1.95
-15	(+ 5)	1016	256	298	132	0.94	5.80	7.69	1.94	2.25
-10	(+14)	1276	321	374	145	0.97	7.31	8.83	2.22	2.59
-5	(+23)	1582	399	464	156	1.01	9.10	10.10	2.55	2.96
0	(+32)	1942	489	569	168	1.05	11.23	11.54	2.91	3.38

TEST CONDITIONS: @220V50Hz			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)	317	80	93	82	0.84	1.79	3.78	0.95	1.11
-30	(-22)	444	112	130	96	0.86	2.52	4.56	1.15	1.34
-25	(-13)	592	149	173	111	0.89	3.36	5.32	1.34	1.56
-20	(- 4)	766	193	224	126	0.92	4.36	6.09	1.53	1.78
-15	(+ 5)	974	246	285	141	0.96	5.56	6.90	1.74	2.02
-10	(+14)	1224	308	359	157	1.01	7.01	7.79	1.96	2.28
-5	(+23)	1522	384	446	173	1.06	8.76	8.78	2.21	2.57
0	(+32)	1877	473	550	190	1.12	10.85	9.92	2.50	2.91

TEST CONDITIONS: @220V50Hz			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)	246	62	72	82	0.83	1.39	3.01	0.76	0.88
-30	(-22)	364	92	107	97	0.86	2.06	3.77	0.95	1.11
-25	(-13)	503	127	147	113	0.89	2.85	4.48	1.13	1.31
-20	(- 4)	671	169	196	130	0.93	3.82	5.17	1.30	1.52
-15	(+ 5)	874	220	256	149	0.99	4.99	5.88	1.48	1.72
-10	(+14)	1121	282	328	168	1.05	6.42	6.64	1.67	1.94
-5	(+23)	1418	357	415	189	1.11	8.16	7.47	1.88	2.19
0	(+32)	1772	447	519	211	1.19	10.24	8.42	2.12	2.47

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
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	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 46°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		