

COMPRESSOR DEFINITION

Designation	EM 2Y60CLC
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513301520

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/cm²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	8.41	[cm³] (0.513 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	18.600	
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)	7.5	[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	TSD2-115V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	4TM302KFBYY-53	
6 Start winding resistance	10.85	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	5.03	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	10.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.76	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	0.75	[A] - Measured according to UL 984
11 Approval boards certification	CE - NOM - UKCA - 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]
548	138	161	96	0.84	1.72	5.74	1.45	1.68

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)	312	79	91	63	0.58	0.98	4.95	1.25	1.45
-30	(-22)	423	107	124	73	0.66	1.33	5.79	1.46	1.70
-25	(-13)	569	143	167	85	0.78	1.79	6.68	1.68	1.96
-20	(- 4)	750	189	220	98	0.91	2.36	7.62	1.92	2.23
-15	(+ 5)	967	244	283	112	1.05	3.04	8.62	2.17	2.53
-10	(+14)	1220	307	357	126	1.17	3.85	9.68	2.44	2.84

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)	296	75	87	62	0.58	0.93	4.75	1.20	1.39
-30	(-22)	399	101	117	74	0.66	1.25	5.44	1.37	1.59
-25	(-13)	537	135	157	87	0.78	1.68	6.17	1.55	1.81
-20	(- 4)	709	179	208	102	0.92	2.23	6.95	1.75	2.04
-15	(+ 5)	916	231	268	118	1.08	2.88	7.78	1.96	2.28
-10	(+14)	1159	292	340	134	1.22	3.66	8.66	2.18	2.54

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)	267	67	78	63	0.61	0.84	4.21	1.06	1.23
-30	(-22)	363	91	106	76	0.69	1.14	4.81	1.21	1.41
-25	(-13)	493	124	144	91	0.81	1.55	5.44	1.37	1.59
-20	(- 4)	657	166	193	107	0.96	2.07	6.12	1.54	1.79
-15	(+ 5)	856	216	251	125	1.13	2.70	6.85	1.73	2.01
-10	(+14)	1091	275	320	143	1.30	3.44	7.62	1.92	2.23

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)	224	56	66	67	0.66	0.70	3.37	0.85	0.99
-30	(-22)	314	79	92	80	0.73	0.99	3.94	0.99	1.16
-25	(-13)	438	110	128	96	0.86	1.38	4.55	1.15	1.33
-20	(- 4)	596	150	175	114	1.02	1.87	5.20	1.31	1.52
-15	(+ 5)	788	199	231	134	1.20	2.48	5.89	1.48	1.72
-10	(+14)	1015	256	297	153	1.39	3.20	6.62	1.67	1.94

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		