

COMPRESSOR DEFINITION

Designation	EM Y3118Y
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	711CA77

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
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	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	1/4 -	[hp]
2 Displacement	12.21	[cm ³] (0.745 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	23.000	
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)	7.7	[kg] (16.98 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	MI2021/V230	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	AE19BU	
6 Start winding resistance	15.23	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.03	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	8.20	[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			ASHRAE LBP-NOFAN 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]
716	180	210	143	1.07	2.25	5.02	1.27	1.47

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN 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)	390	98	114	100	0.95	1.22	3.88	0.98	1.14
-30	(-22)	515	130	151	116	0.98	1.62	4.47	1.13	1.31
-25	(-13)	683	172	200	133	1.02	2.14	5.16	1.30	1.51
-20	(- 4)	889	224	261	150	1.07	2.79	5.92	1.49	1.73
-15	(+ 5)	1133	285	332	168	1.12	3.57	6.72	1.69	1.97
-10	(+14)	1410	355	413	187	1.18	4.45	7.54	1.90	2.21
-5	(+23)	1720	433	504	206	1.24	5.44	8.36	2.11	2.45
0	(+32)	2059	519	603	225	1.31	6.53	9.14	2.30	2.68

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN 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)	359	90	105	101	0.95	1.12	3.58	0.90	1.05
-30	(-22)	480	121	141	118	0.98	1.51	4.11	1.03	1.20
-25	(-13)	643	162	188	137	1.03	2.02	4.71	1.19	1.38
-20	(- 4)	845	213	248	157	1.08	2.66	5.37	1.35	1.57
-15	(+ 5)	1083	273	317	178	1.15	3.41	6.05	1.53	1.77
-10	(+14)	1355	342	397	201	1.22	4.28	6.74	1.70	1.97
-5	(+23)	1659	418	486	225	1.31	5.25	7.39	1.86	2.17
0	(+32)	1992	502	584	249	1.39	6.32	8.00	2.02	2.34

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN 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)	332	84	97	101	0.94	1.04	3.26	0.82	0.96
-30	(-22)	446	112	131	120	0.98	1.40	3.75	0.95	1.10
-25	(-13)	600	151	176	140	1.03	1.88	4.31	1.08	1.26
-20	(- 4)	794	200	233	162	1.09	2.50	4.89	1.23	1.43
-15	(+ 5)	1023	258	300	187	1.17	3.22	5.48	1.38	1.61
-10	(+14)	1287	324	377	213	1.27	4.06	6.05	1.52	1.77
-5	(+23)	1582	399	463	241	1.37	5.00	6.58	1.66	1.93
0	(+32)	1906	480	558	271	1.48	6.05	7.04	1.77	2.06

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° up + 45° to Back		
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	Slanted 0° up + 45° to Back		
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 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		