

### 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	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)	-	-	-
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 <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4 -	[hp]
2 Displacement	12.21	[cm <sup>3</sup> ] (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 <sup>2</sup> ]

### 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	5(350)	[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]
721	182	211	135	0.76	2.26	5.34	1.35	1.56

### 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)	396	100	116	96	0.67	1.24	4.13	1.04	1.21
-30	(-22)	522	131	153	110	0.71	1.64	4.76	1.20	1.40
-25	(-13)	690	174	202	126	0.76	2.17	5.50	1.39	1.61
-20	(- 4)	900	227	264	143	0.82	2.83	6.31	1.59	1.85
-15	(+ 5)	1148	289	336	160	0.88	3.61	7.17	1.81	2.10
-10	(+14)	1432	361	419	178	0.95	4.52	8.05	2.03	2.36
-5	(+23)	1748	441	512	196	1.03	5.53	8.94	2.25	2.62
0	(+32)	2095	528	614	214	1.10	6.64	9.80	2.47	2.87

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)	366	92	107	97	0.67	1.15	3.79	0.96	1.11
-30	(-22)	487	123	143	112	0.71	1.53	4.37	1.10	1.28
-25	(-13)	651	164	191	130	0.77	2.04	5.03	1.27	1.47
-20	(- 4)	856	216	251	148	0.84	2.69	5.75	1.45	1.69
-15	(+ 5)	1099	277	322	168	0.91	3.46	6.50	1.64	1.91
-10	(+14)	1377	347	404	189	1.00	4.35	7.26	1.83	2.13
-5	(+23)	1688	425	495	211	1.09	5.34	8.00	2.02	2.35
0	(+32)	2030	511	595	233	1.18	6.44	8.70	2.19	2.55

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)	336	85	98	98	0.67	1.05	3.43	0.86	1.00
-30	(-22)	449	113	132	114	0.72	1.41	3.97	1.00	1.16
-25	(-13)	606	153	178	133	0.78	1.90	4.57	1.15	1.34
-20	(- 4)	803	202	235	154	0.86	2.52	5.22	1.32	1.53
-15	(+ 5)	1038	261	304	176	0.95	3.27	5.88	1.48	1.72
-10	(+14)	1308	330	383	200	1.04	4.13	6.53	1.65	1.91
-5	(+23)	1610	406	472	226	1.15	5.09	7.14	1.80	2.09
0	(+32)	1943	490	569	252	1.26	6.16	7.70	1.94	2.26

### 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		