

COMPRESSOR DEFINITION

Designation	EM X3118Y
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	701ZA77

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 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	1/5	[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)	7.4	[kg] (16.31 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	5(350)	[μF(VAC minimum)]
5 Motor protection	AE15BU	
6 Start winding resistance	17.30	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.16	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	7.84	[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]
722	182	212	123	0.59	2.27	5.86	1.48	1.72

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)	379	95	111	80	0.45	1.19	4.80	1.21	1.41
-30	(-22)	511	129	150	95	0.50	1.60	5.44	1.37	1.60
-25	(-13)	687	173	201	111	0.57	2.16	6.20	1.56	1.82
-20	(- 4)	902	227	264	128	0.64	2.83	7.02	1.77	2.06
-15	(+ 5)	1151	290	337	146	0.73	3.62	7.86	1.98	2.30
-10	(+14)	1427	360	418	165	0.81	4.50	8.67	2.19	2.54
-5	(+23)	1726	435	506	184	0.90	5.46	9.41	2.37	2.76
0	(+32)	2041	514	598	203	0.99	6.47	10.04	2.53	2.94

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)	375	94	110	83	0.47	1.17	4.48	1.13	1.31
-30	(-22)	497	125	146	98	0.52	1.56	5.06	1.27	1.48
-25	(-13)	664	167	195	115	0.59	2.09	5.73	1.44	1.68
-20	(- 4)	871	220	255	134	0.68	2.74	6.45	1.63	1.89
-15	(+ 5)	1113	280	326	154	0.77	3.50	7.19	1.81	2.11
-10	(+14)	1383	348	405	176	0.86	4.36	7.88	1.98	2.31
-5	(+23)	1676	422	491	199	0.97	5.30	8.48	2.14	2.49
0	(+32)	1987	501	582	222	1.08	6.30	8.96	2.26	2.62

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)	327	82	96	82	0.46	1.02	4.01	1.01	1.17
-30	(-22)	438	110	128	98	0.52	1.37	4.51	1.14	1.32
-25	(-13)	596	150	175	117	0.60	1.87	5.11	1.29	1.50
-20	(- 4)	794	200	233	138	0.69	2.50	5.74	1.45	1.68
-15	(+ 5)	1028	259	301	161	0.80	3.24	6.36	1.60	1.86
-10	(+14)	1291	325	378	186	0.91	4.07	6.93	1.75	2.03
-5	(+23)	1578	398	462	214	1.04	4.99	7.41	1.87	2.17
0	(+32)	1884	475	552	242	1.17	5.98	7.74	1.95	2.27

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		