

COMPRESSOR DEFINITION

Designation	EM X32CLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513301889

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 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	187 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	187 to 255 V	-
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	1/7	[hp]
2 Displacement	5.96	[cm ³] (0.364 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	15.000	
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)	7.3	[kg] (16.09 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	TSD	
2.1 Starting device	TSD-220V0.6/TSD2-220V/TSD2-220V1.2/TSD2-D-220V	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	2.5(300)/2(300)/4(300)	[µF(VAC minimum)]
5 Motor protection	4TM189KFBYY-73	
6 Start winding resistance	22.72	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	42.27	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	3.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.40	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	0.50	[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 (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
315	79	92	54	0.28	0.99	5.88	1.48	1.72

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN Static				(Condensing temperature 35°C (+95°F))				
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	221	56	65	33	0.20	0.69	6.63	1.67	1.94
-30	(-22)	289	73	85	42	0.23	0.90	6.93	1.75	2.03
-25	(-13)	368	93	108	49	0.25	1.15	7.64	1.92	2.24
-20	(- 4)	464	117	136	54	0.28	1.46	8.67	2.18	2.54
-15	(+ 5)	581	146	170	58	0.30	1.83	9.93	2.50	2.91
-10	(+14)	723	182	212	63	0.32	2.28	11.34	2.86	3.32

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN Static				(Condensing temperature 45°C (+113°F))				
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	172	43	50	33	0.19	0.54	5.25	1.32	1.54
-30	(-22)	244	61	71	43	0.23	0.76	5.67	1.43	1.66
-25	(-13)	325	82	95	51	0.26	1.02	6.40	1.61	1.87
-20	(- 4)	422	106	124	57	0.29	1.32	7.36	1.85	2.16
-15	(+ 5)	537	135	157	63	0.32	1.69	8.46	2.13	2.48
-10	(+14)	676	170	198	70	0.35	2.13	9.62	2.43	2.82

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN Static				(Condensing temperature 55°C (+131°F))				
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	131	33	39	32	0.19	0.41	4.20	1.06	1.23
-30	(-22)	205	52	60	43	0.23	0.64	4.75	1.20	1.39
-25	(-13)	286	72	84	51	0.26	0.90	5.52	1.39	1.62
-20	(- 4)	381	96	112	59	0.30	1.20	6.43	1.62	1.88
-15	(+ 5)	493	124	144	67	0.34	1.55	7.39	1.86	2.17
-10	(+14)	627	158	184	75	0.38	1.98	8.32	2.10	2.44

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32-NOFAN Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	101	26	30	29	0.18	0.32	3.47	0.87	1.02
-30	(-22)	174	44	51	41	0.22	0.55	4.16	1.05	1.22
-25	(-13)	254	64	74	50	0.26	0.80	4.99	1.26	1.46
-20	(- 4)	344	87	101	59	0.30	1.08	5.87	1.48	1.72
-15	(+ 5)	451	114	132	68	0.34	1.42	6.71	1.69	1.97
-10	(+14)	579	146	170	79	0.39	1.83	7.42	1.87	2.17

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 + 24° 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		