COMPRESSOR DEFINITION

Designation	**EM X20CLC**
Nominal Voltage/Frequency	**220 V 60 Hz**
Engineering Number	**513309548**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220 / 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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	-	198 to 242 V
8.2 LBP (43ºC Ambient temperature)	Static	-	198 to 242 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/12	[hp]
2 Displacement	3.97	[cm³] (0.242 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	14.000	
3 Lubricant charge	180	[ml] (6.09 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.88	[kg] (17.37 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C3/QPS2-A22MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(300)	[µF(VAC minimum)]
5 Motor protection	4TM 104REBYY-53	
6 Start winding resistance	22.10	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	50.65	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	2.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.43	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - TUV - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V60Hz**			**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]
266	67	78	50	0.90	0.84	5.37	1.35	1.57

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **35ºC (+95ºF))**

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)**	154	39	45	37	0.30	0.48	4.19	1.05	1.23
-30	**(-22)**	216	54	63	42	0.32	0.68	5.14	1.30	1.51
-25	**(-13)**	273	69	80	45	0.32	0.86	6.04	1.52	1.77
-20	**(- 4)**	339	85	99	48	0.32	1.06	7.00	1.76	2.05
-15	**(+ 5)**	425	107	125	51	0.32	1.34	8.16	2.06	2.39
-10	**(+14)**	545	137	160	56	0.32	1.72	9.62	2.42	2.82

TEST CONDITIONS: **@220V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **45ºC (+113ºF))**

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)**	132	33	39	38	0.29	0.41	3.49	0.88	1.02
-30	**(-22)**	199	50	58	43	0.31	0.62	4.58	1.15	1.34
-25	**(-13)**	259	65	76	47	0.31	0.81	5.51	1.39	1.62
-20	**(- 4)**	326	82	95	51	0.31	1.02	6.40	1.61	1.88
-15	**(+ 5)**	410	103	120	55	0.32	1.29	7.38	1.86	2.16
-10	**(+14)**	526	132	154	61	0.33	1.66	8.57	2.16	2.51

TEST CONDITIONS: **@220V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **55ºC (+131ºF))**

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)**	106	27	31	37	0.30	0.33	2.76	0.69	0.81
-30	**(-22)**	178	45	52	43	0.31	0.56	4.00	1.01	1.17
-25	**(-13)**	240	60	70	48	0.31	0.75	4.98	1.25	1.46
-20	**(- 4)**	306	77	90	53	0.31	0.96	5.81	1.46	1.70
-15	**(+ 5)**	387	98	113	58	0.32	1.22	6.63	1.67	1.94
-10	**(+14)**	496	125	145	65	0.34	1.57	7.55	1.90	2.21

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@220V60Hz **Static**

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)**	67	17	20	31	0.29	0.21	2.18	0.55	0.64
-30	**(-22)**	141	36	41	38	0.29	0.44	3.58	0.90	1.05
-25	**(-13)**	204	51	60	44	0.29	0.64	4.62	1.16	1.35
-20	**(- 4)**	267	67	78	50	0.28	0.84	5.41	1.36	1.58
-15	**(+ 5)**	343	87	101	57	0.29	1.08	6.07	1.53	1.78
-10	**(+14)**	445	112	130	66	0.32	1.41	6.74	1.70	1.98

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EUEM		
2 Tray holder	No		
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	Slanted 42º 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 parallet BP+24°to Back		
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	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		