

COMPRESSOR DEFINITION

Designation	EG X80CLC
Nominal Voltage/Frequency	100 V 50-60 Hz
Engineering Number	513703010

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	100 / 50-60	[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 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	85 to 110 V	90 to 110 V
8.2 LBP (43°C Ambient temperature)	Static	85 to 110 V	85 to 110 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		[hp]
2 Displacement	11.14	[cm ³] (0.680 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	21.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	10.97	[kg] (24.18 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA14C3/8EA21C3/QPS2-*4R7MD3/QPS2-A4R7MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	20(180)	[µF(VAC minimum)]
5 Motor protection	5TM427KFBYY	
6 Start winding resistance	4.17	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	15.87/14.33	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	2.19/1.72	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	2.73/2.37	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			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]	
667	168	195	110	1.23	2.09	6.05	1.52	1.77	

TEST CONDITIONS: @100V60Hz			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]	
850	214	249	137	1.35	2.67	6.22	1.57	1.82	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		ASHRAE32 Static				(Condensing temperature 35°C (+95°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)	389	98	114	72	0.92	1.22	5.35	1.35	1.57
-30	(-22)	519	131	152	84	1.01	1.63	6.16	1.55	1.80
-25	(-13)	677	171	198	96	1.11	2.12	7.04	1.77	2.06
-20	(- 4)	870	219	255	109	1.22	2.73	8.04	2.03	2.36
-15	(+ 5)	1106	279	324	121	1.34	3.48	9.20	2.32	2.70
-10	(+14)	1391	351	408	132	1.45	4.39	10.57	2.66	3.10

TEST CONDITIONS: @100V50Hz		ASHRAE32 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)	364	92	107	77	0.95	1.14	4.76	1.20	1.40
-30	(-22)	492	124	144	89	1.05	1.54	5.53	1.39	1.62
-25	(-13)	649	164	190	102	1.16	2.04	6.36	1.60	1.86
-20	(- 4)	842	212	247	115	1.29	2.65	7.28	1.83	2.13
-15	(+ 5)	1079	272	316	129	1.43	3.40	8.34	2.10	2.44
-10	(+14)	1366	344	400	142	1.56	4.31	9.59	2.42	2.81

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		ASHRAE32 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)	341	86	100	78	0.96	1.07	4.37	1.10	1.28	
-30 (-22)	461	116	135	91	1.07	1.45	5.07	1.28	1.48	
-25 (-13)	611	154	179	105	1.20	1.92	5.79	1.46	1.70	
-20 (- 4)	798	201	234	121	1.35	2.51	6.60	1.66	1.93	
-15 (+ 5)	1030	260	302	137	1.50	3.24	7.52	1.90	2.20	
-10 (+14)	1314	331	385	152	1.67	4.15	8.61	2.17	2.52	

TEST CONDITIONS: @100V50Hz		ASHRAE32 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)	318	80	93	76	0.94	1.00	4.14	1.04	1.21	
-30 (-22)	424	107	124	91	1.06	1.33	4.72	1.19	1.38	
-25 (-13)	562	142	165	107	1.21	1.76	5.31	1.34	1.56	
-20 (- 4)	738	186	216	125	1.38	2.32	5.95	1.50	1.74	
-15 (+ 5)	960	242	281	143	1.57	3.02	6.69	1.69	1.96	
-10 (+14)	1234	311	362	162	1.76	3.90	7.58	1.91	2.22	

TEST CONDITIONS: @100V60Hz		ASHRAE32 Static			(Condensing temperature 35°C (+95°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)	469	118	137	85	0.85	1.47	5.52	1.39	1.62	
-30 (-22)	615	155	180	98	0.98	1.93	6.26	1.58	1.83	
-25 (-13)	787	198	231	111	1.11	2.47	7.10	1.79	2.08	
-20 (- 4)	996	251	292	124	1.25	3.13	8.04	2.03	2.36	
-15 (+ 5)	1250	315	366	137	1.39	3.93	9.10	2.29	2.67	
-10 (+14)	1561	393	457	152	1.53	4.92	10.26	2.59	3.01	

TEST CONDITIONS: @100V60Hz		ASHRAE32 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)	458	115	134	93	0.93	1.43	4.96	1.25	1.45	
-30 (-22)	609	153	178	107	1.07	1.91	5.68	1.43	1.66	
-25 (-13)	786	198	230	121	1.22	2.47	6.49	1.64	1.90	
-20 (- 4)	999	252	293	135	1.37	3.14	7.40	1.86	2.17	
-15 (+ 5)	1257	317	368	149	1.53	3.96	8.41	2.12	2.46	
-10 (+14)	1571	396	460	165	1.68	4.95	9.52	2.40	2.79	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE32 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)	418	105	123	92	0.93	1.31	4.54	1.14	1.33
-30	(-22)	574	145	168	110	1.11	1.80	5.17	1.30	1.52
-25	(-13)	755	190	221	128	1.29	2.37	5.90	1.49	1.73
-20	(- 4)	971	245	285	145	1.47	3.05	6.72	1.69	1.97
-15	(+ 5)	1233	311	361	162	1.66	3.88	7.63	1.92	2.24
-10	(+14)	1549	390	454	180	1.85	4.89	8.63	2.18	2.53

TEST CONDITIONS: @100V60Hz		ASHRAE32 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)	350	88	102	83	0.85	1.10	4.24	1.07	1.24
-30	(-22)	510	128	149	107	1.08	1.60	4.75	1.20	1.39
-25	(-13)	694	175	203	130	1.31	2.18	5.33	1.34	1.56
-20	(- 4)	914	230	268	152	1.55	2.87	6.00	1.51	1.76
-15	(+ 5)	1178	297	345	174	1.79	3.71	6.75	1.70	1.98
-10	(+14)	1496	377	438	197	2.03	4.72	7.59	1.91	2.22

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
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	Straight		
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	Straight		
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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		