

COMPRESSOR DEFINITION

Designation	EG T70CLC
Nominal Voltage/Frequency	100 V 50-60 Hz
Engineering Number	513700113

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	85 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 pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[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	MINERAL / ISO10	
4 Weight (with oil charge)	11.06	[kg] (24.38 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	7M4R7MD3/8EA14C3/8EA21C3/8EA3B3/8EA4B3/8M4R7MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	20(180)	[µF(VAC minimum)]
5 Motor protection	4TM427NFBYY-53	
6 Start winding resistance	3.70	[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)	16.50/15.20	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.40/1.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[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]
625	158	183	118	1.50	1.96	5.28	1.33	1.55

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]
755	190	221	139	1.46	2.37	5.45	1.37	1.60

E - PERFORMANCE - CURVES

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)	338	85	99	88	1.15	1.06	3.84	0.97	1.13
-30 (-22)	477	120	140	99	1.27	1.50	4.79	1.21	1.40
-25 (-13)	621	157	182	110	1.39	1.95	5.64	1.42	1.65
-20 (- 4)	790	199	231	122	1.51	2.48	6.47	1.63	1.90
-15 (+ 5)	1002	253	294	136	1.64	3.16	7.36	1.85	2.16
-10 (+14)	1279	322	375	152	1.78	4.03	8.36	2.11	2.45

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)	294	74	86	85	1.26	0.92	3.43	0.86	1.01
-30 (-22)	430	108	126	100	1.36	1.35	4.27	1.08	1.25
-25 (-13)	570	144	167	114	1.47	1.79	5.01	1.26	1.47
-20 (- 4)	733	185	215	128	1.58	2.30	5.73	1.44	1.68
-15 (+ 5)	938	236	275	144	1.71	2.95	6.50	1.64	1.90
-10 (+14)	1207	304	354	163	1.86	3.81	7.39	1.86	2.17

E - PERFORMANCE - CURVES

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)	237	60	70	83	1.22	0.74	2.86	0.72	0.84	
-30 (-22)	370	93	108	100	1.33	1.16	3.65	0.92	1.07	
-25 (-13)	504	127	148	116	1.45	1.58	4.34	1.09	1.27	
-20 (- 4)	661	167	194	133	1.59	2.08	5.01	1.26	1.47	
-15 (+ 5)	859	217	252	150	1.74	2.71	5.73	1.44	1.68	
-10 (+14)	1119	282	328	170	1.93	3.53	6.57	1.65	1.92	

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)	384	97	112	96	1.09	1.20	4.00	1.01	1.17	
-30 (-22)	548	138	161	113	1.23	1.72	4.86	1.22	1.42	
-25 (-13)	735	185	215	129	1.38	2.31	5.70	1.44	1.67	
-20 (- 4)	953	240	279	146	1.53	2.99	6.55	1.65	1.92	
-15 (+ 5)	1210	305	355	162	1.70	3.81	7.45	1.88	2.18	
-10 (+14)	1516	382	444	180	1.87	4.78	8.41	2.12	2.46	

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)	339	85	99	93	1.04	1.06	3.63	0.91	1.06	
-30 (-22)	500	126	146	112	1.21	1.57	4.41	1.11	1.29	
-25 (-13)	682	172	200	132	1.40	2.14	5.16	1.30	1.51	
-20 (- 4)	896	226	263	152	1.59	2.82	5.91	1.49	1.73	
-15 (+ 5)	1151	290	337	173	1.79	3.62	6.68	1.68	1.96	
-10 (+14)	1454	366	426	194	2.01	4.59	7.49	1.89	2.20	

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)	264	67	77	85	0.97	0.83	3.15	0.79	0.92	
-30 (-22)	425	107	124	108	1.18	1.33	3.90	0.98	1.14	
-25 (-13)	608	153	178	132	1.40	1.91	4.60	1.16	1.35	
-20 (- 4)	822	207	241	156	1.64	2.59	5.28	1.33	1.55	
-15 (+ 5)	1077	272	316	181	1.88	3.39	5.96	1.50	1.75	
-10 (+14)	1382	348	405	207	2.14	4.36	6.67	1.68	1.96	

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		