

COMPRESSOR DEFINITION

Designation	EG Y+90CLC
Nominal Voltage/Frequency	100 V 50-60 Hz
Engineering Number	513700175

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		[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	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO10	
4 Weight (with oil charge)	11.24	[kg] (24.78 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	7M4R7MD3/8M4R7MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	20(150)	[µF(VAC minimum)]
5 Motor protection	4TM414RFBYY-53	
6 Start winding resistance	5.12	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.44	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	16.70/15.60	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	2.84/2.56	[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]
750	189	220	132	1.53	2.35	5.70	1.44	1.67

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]
875	221	256	154	1.54	2.75	5.70	1.44	1.67

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)	415	105	122	92	1.18	1.30	4.49	1.13	1.31
-30 (-22)	541	136	158	106	1.30	1.69	5.18	1.31	1.52
-25 (-13)	715	180	209	120	1.42	2.24	6.01	1.51	1.76
-20 (- 4)	933	235	273	134	1.54	2.93	6.93	1.75	2.03
-15 (+ 5)	1192	300	349	150	1.68	3.75	7.91	1.99	2.32
-10 (+14)	1488	375	436	167	1.84	4.69	8.89	2.24	2.60

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)	344	87	101	92	1.18	1.08	3.75	0.94	1.10
-30 (-22)	491	124	144	109	1.33	1.54	4.52	1.14	1.33
-25 (-13)	677	171	198	126	1.48	2.12	5.37	1.35	1.57
-20 (- 4)	899	227	263	143	1.63	2.83	6.26	1.58	1.83
-15 (+ 5)	1153	291	338	161	1.78	3.63	7.14	1.80	2.09
-10 (+14)	1435	362	421	180	1.95	4.53	7.96	2.01	2.33

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)	292	74	86	85	1.11	0.91	3.44	0.87	1.01	
-30 (-22)	455	115	133	105	1.30	1.43	4.27	1.08	1.25	
-25 (-13)	649	164	190	126	1.48	2.04	5.12	1.29	1.50	
-20 (- 4)	871	219	255	146	1.66	2.74	5.95	1.50	1.74	
-15 (+ 5)	1116	281	327	167	1.84	3.51	6.71	1.69	1.96	
-10 (+14)	1381	348	405	189	2.03	4.36	7.35	1.85	2.15	

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)	479	121	140	106	1.05	1.50	4.52	1.14	1.32	
-30 (-22)	632	159	185	123	1.24	1.98	5.20	1.31	1.52	
-25 (-13)	837	211	245	141	1.43	2.63	5.96	1.50	1.75	
-20 (- 4)	1094	276	321	161	1.63	3.44	6.80	1.71	1.99	
-15 (+ 5)	1403	354	411	182	1.84	4.42	7.68	1.94	2.25	
-10 (+14)	1765	445	517	204	2.05	5.57	8.60	2.17	2.52	

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)	397	100	116	104	1.05	1.24	3.83	0.97	1.12	
-30 (-22)	572	144	168	124	1.25	1.79	4.61	1.16	1.35	
-25 (-13)	789	199	231	146	1.46	2.48	5.41	1.36	1.59	
-20 (- 4)	1047	264	307	168	1.68	3.29	6.22	1.57	1.82	
-15 (+ 5)	1348	340	395	192	1.91	4.24	7.02	1.77	2.06	
-10 (+14)	1691	426	495	217	2.16	5.33	7.79	1.96	2.28	

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)	317	80	93	93	0.92	0.99	3.43	0.87	1.01	
-30 (-22)	513	129	150	118	1.16	1.61	4.29	1.08	1.26	
-25 (-13)	739	186	217	144	1.42	2.32	5.10	1.29	1.50	
-20 (- 4)	997	251	292	170	1.69	3.13	5.86	1.48	1.72	
-15 (+ 5)	1286	324	377	197	1.98	4.05	6.56	1.65	1.92	
-10 (+14)	1607	405	471	226	2.29	5.07	7.16	1.80	2.10	

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		