

COMPRESSOR DEFINITION

Designation	EG Y70HLPW
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513700255

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115-127 / 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	98 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	85 to 110 V	98 to 140 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[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	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	11.35	[kg] (25.02 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Combo	
2.1 Starting device	3ARR51M4F/3ARR55M4F	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	20(180)	[µF(VAC minimum)]
5 Motor protection	3ARR51/55M4F	
6 Start winding resistance	6.25	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	10.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.60	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
685	173	201	124	1.23	3.89	5.53	1.39	1.62

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	368	93	108	87	0.99	2.08	4.21	1.06	1.23
-30 (-22)	508	128	149	101	1.08	2.88	5.03	1.27	1.47
-25 (-13)	683	172	200	116	1.17	3.88	5.90	1.49	1.73
-20 (- 4)	900	227	264	131	1.27	5.12	6.85	1.73	2.01
-15 (+ 5)	1166	294	342	148	1.38	6.66	7.87	1.98	2.31
-10 (+14)	1487	375	436	165	1.51	8.52	8.97	2.26	2.63

TEST CONDITIONS: @115V60Hz			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)	300	76	88	86	0.98	1.70	3.51	0.88	1.03
-30 (-22)	443	112	130	102	1.08	2.51	4.34	1.09	1.27
-25 (-13)	618	156	181	119	1.18	3.51	5.19	1.31	1.52
-20 (- 4)	831	209	243	137	1.30	4.73	6.07	1.53	1.78
-15 (+ 5)	1088	274	319	155	1.43	6.21	6.99	1.76	2.05
-10 (+14)	1397	352	409	175	1.58	8.00	7.94	2.00	2.33

TEST CONDITIONS: @115V60Hz			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)	239	60	70	80	0.96	1.35	2.98	0.75	0.87
-30 (-22)	380	96	111	99	1.06	2.15	3.81	0.96	1.12
-25 (-13)	549	138	161	119	1.18	3.12	4.62	1.16	1.35
-20 (- 4)	752	190	220	139	1.32	4.28	5.42	1.37	1.59
-15 (+ 5)	997	251	292	161	1.47	5.69	6.21	1.57	1.82
-10 (+14)	1288	325	378	184	1.66	7.38	7.00	1.76	2.05

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	Yes		
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)	4.9 +0.02/-0.05	[mm]	(0.193" +0.001"/-0.002")
3.5 Connector sealing	Rubber Plugs		