

COMPRESSOR DEFINITION

Designation	EG Y90HLP
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513700166

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	RSIR		
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	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 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	7.55	[cm ³] (0.461 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	19.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO7	
4 Weight (with oil charge)	11.07	[kg] (24.40 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	PTC	
2.1 Starting device	4SP14U437N/4SP14W437N/4SP21U437N/4SP21W437N	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4SP14/21(U/W)437NFX	
6 Start winding resistance	6.05	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.95	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	15.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.70	[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]
950	239	278	176	2.12	5.40	5.41	1.36	1.59

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)	520	131	152	113	1.69	2.94	4.58	1.15	1.34
-30 (-22)	729	184	213	136	1.85	4.13	5.34	1.35	1.57
-25 (-13)	963	243	282	159	2.00	5.47	6.05	1.53	1.77
-20 (- 4)	1235	311	362	183	2.16	7.03	6.76	1.70	1.98
-15 (+ 5)	1558	393	456	208	2.33	8.89	7.49	1.89	2.19
-10 (+14)	1943	490	569	234	2.52	11.13	8.29	2.09	2.43

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)	453	114	133	112	1.69	2.56	4.07	1.03	1.19
-30 (-22)	647	163	190	135	1.85	3.67	4.77	1.20	1.40
-25 (-13)	873	220	256	161	2.03	4.96	5.40	1.36	1.58
-20 (- 4)	1142	288	335	190	2.22	6.50	6.01	1.51	1.76
-15 (+ 5)	1468	370	430	221	2.45	8.38	6.63	1.67	1.94
-10 (+14)	1861	469	545	254	2.70	10.66	7.31	1.84	2.14

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)	409	103	120	109	1.67	2.31	3.73	0.94	1.09
-30 (-22)	578	146	169	134	1.84	3.28	4.33	1.09	1.27
-25 (-13)	784	198	230	163	2.03	4.45	4.85	1.22	1.42
-20 (- 4)	1039	262	305	196	2.27	5.91	5.34	1.34	1.56
-15 (+ 5)	1356	342	397	233	2.54	7.74	5.82	1.47	1.71
-10 (+14)	1746	440	511	274	2.86	10.00	6.35	1.60	1.86

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-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		