

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	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	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	Combo	
2.1 Starting device	3ARR51D4A/3ARR55D4A	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	20(180)	[µF(VAC minimum)]
5 Motor protection	3ARR55D4A	
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)	2.40	[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	168	1.53	5.40	5.65	1.42	1.66

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	1.09	2.94	4.59	1.16	1.34
-30 (-22)	729	184	213	132	1.25	4.13	5.47	1.38	1.60
-25 (-13)	963	243	282	152	1.42	5.47	6.31	1.59	1.85
-20 (- 4)	1235	311	362	173	1.59	7.03	7.15	1.80	2.10
-15 (+ 5)	1558	393	456	194	1.77	8.89	8.03	2.02	2.35
-10 (+14)	1943	490	569	216	1.96	11.13	8.99	2.27	2.64

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	114	1.08	2.56	3.98	1.00	1.17
-30 (-22)	647	163	190	135	1.26	3.67	4.77	1.20	1.40
-25 (-13)	873	220	256	158	1.44	4.96	5.52	1.39	1.62
-20 (- 4)	1142	288	335	182	1.64	6.50	6.26	1.58	1.84
-15 (+ 5)	1468	370	430	208	1.86	8.38	7.05	1.78	2.07
-10 (+14)	1861	469	545	235	2.09	10.66	7.92	1.99	2.32

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	111	1.06	2.31	3.67	0.92	1.08
-30 (-22)	578	146	169	134	1.25	3.28	4.34	1.09	1.27
-25 (-13)	784	198	230	159	1.45	4.45	4.96	1.25	1.45
-20 (- 4)	1039	262	305	187	1.69	5.91	5.58	1.41	1.64
-15 (+ 5)	1356	342	397	217	1.94	7.74	6.24	1.57	1.83
-10 (+14)	1746	440	511	249	2.23	10.00	6.98	1.76	2.05

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		