

COMPRESSOR DEFINITION

Designation	EG X90HLC
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513703003

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	-	98 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	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/cm²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4+	[hp]
2 Displacement	7.15	[cm ³] (0.436 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	18.000	
3 Lubricant charge	230	[ml] (7.78 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO7	
4 Weight (with oil charge)	11.3	[kg] (24.91 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	7M4R7MD3/8EA14C3/8EA1B3/8EA21C3/8EA3B3/8EA4B3/8M4I	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	12(180)	[µF(VAC minimum)]
5 Motor protection	4TM437NFBYY-53	
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	CCC - 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	153	1.37	5.40	6.19	1.56	1.81

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32				(Condensing temperature 45°C (+113°F))				
@115V60Hz		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	499	126	146	101	0.93	2.82	4.89	1.23	1.43
-30	(-22)	704	177	206	121	1.09	3.99	5.81	1.46	1.70
-25	(-13)	934	235	274	141	1.27	5.30	6.62	1.67	1.94
-20	(- 4)	1205	304	353	163	1.45	6.86	7.43	1.87	2.18
-15	(+ 5)	1535	387	450	184	1.64	8.77	8.33	2.10	2.44
-10	(+14)	1942	489	569	206	1.81	11.13	9.41	2.37	2.76

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)	412	104	121	97	0.90	2.33	4.27	1.08	1.25
-30	(-22)	626	158	183	120	1.09	3.55	5.17	1.30	1.52
-25	(-13)	859	217	252	145	1.29	4.88	5.92	1.49	1.73
-20	(- 4)	1130	285	331	171	1.51	6.43	6.60	1.66	1.93
-15	(+ 5)	1454	366	426	198	1.74	8.30	7.32	1.85	2.15
-10	(+14)	1851	466	542	225	1.97	10.60	8.18	2.06	2.40

TEST CONDITIONS: @115V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	316	80	92	87	0.81	1.78	3.65	0.92	1.07
-30	(-22)	533	134	156	114	1.03	3.02	4.57	1.15	1.34
-25	(-13)	765	193	224	144	1.28	4.34	5.29	1.33	1.55
-20	(- 4)	1029	259	302	176	1.55	5.86	5.89	1.48	1.72
-15	(+ 5)	1343	339	394	208	1.83	7.67	6.47	1.63	1.89
-10	(+14)	1724	435	505	241	2.12	9.88	7.13	1.80	2.09

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
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	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		