

COMPRESSOR DEFINITION

Designation	EG X90HLC
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513703050

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50	[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	198 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 255 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	7.15	[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	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	MI2021X	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	4(350)	[μF(VAC minimum)]
5 Motor protection	AD58FYX	
6 Start winding resistance	20.62	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	16.42	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.83	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.98	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.19	[A] - Measured according to UL 984
11 Approval boards certification	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
763	192	224	128	0.60	4.34	5.97	1.50	1.75

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static				(Condensing temperature 35°C (+95°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)	434	109	127	80	0.39	2.46	5.42	1.36	1.59
-30	(-22)	572	144	167	92	0.45	3.24	6.24	1.57	1.83
-25	(-13)	746	188	219	104	0.50	4.24	7.19	1.81	2.11
-20	(- 4)	967	244	283	117	0.55	5.50	8.27	2.08	2.42
-15	(+ 5)	1242	313	364	130	0.61	7.09	9.50	2.39	2.78
-10	(+14)	1581	398	463	145	0.67	9.06	10.88	2.74	3.19

TEST CONDITIONS: @220V50Hz		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)	410	103	120	85	0.41	2.32	4.84	1.22	1.42
-30	(-22)	553	139	162	100	0.48	3.14	5.58	1.41	1.63
-25	(-13)	727	183	213	114	0.54	4.13	6.38	1.61	1.87
-20	(- 4)	939	237	275	129	0.61	5.35	7.25	1.83	2.13
-15	(+ 5)	1199	302	351	145	0.68	6.84	8.22	2.07	2.41
-10	(+14)	1515	382	444	163	0.76	8.68	9.29	2.34	2.72

TEST CONDITIONS: @220V50Hz		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)	358	90	105	84	0.40	2.03	4.25	1.07	1.25
-30	(-22)	510	129	150	103	0.49	2.89	4.92	1.24	1.44
-25	(-13)	685	173	201	122	0.57	3.89	5.60	1.41	1.64
-20	(- 4)	891	225	261	141	0.66	5.07	6.30	1.59	1.84
-15	(+ 5)	1137	287	333	162	0.75	6.49	7.03	1.77	2.06
-10	(+14)	1433	361	420	184	0.85	8.21	7.81	1.97	2.29

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		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)	280	71	82	77	0.37	1.58	3.63	0.91	1.06
-30	(-22)	442	111	130	102	0.48	2.51	4.25	1.07	1.25
-25	(-13)	620	156	182	127	0.60	3.52	4.84	1.22	1.42
-20	(- 4)	822	207	241	153	0.72	4.68	5.38	1.36	1.58
-15	(+ 5)	1057	266	310	180	0.84	6.03	5.91	1.49	1.73
-10	(+14)	1334	336	391	209	0.97	7.64	6.42	1.62	1.88

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		