

COMPRESSOR DEFINITION

Designation	F GT90HA
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513200227

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115 / 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	-	103 to 135 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 135 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4+	[hp]
2 Displacement	7.95	[cm ³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	11.2	[kg] (24.69 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 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M4R7MD3/8EA14C3/8EA1B3/QPS2-A4R7MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	20(180)	[µF(VAC minimum)]
5 Motor protection	4TM427NFBYY-53	
6 Start winding resistance	2.95	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.45	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	16.50	[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]
930	234	273	177	1.63	5.28	5.27	1.33	1.54

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)	476	120	140	118	1.06	2.69	4.03	1.02	1.18
-30 (-22)	656	165	192	140	1.24	3.72	4.69	1.18	1.38
-25 (-13)	894	225	262	164	1.44	5.08	5.46	1.38	1.60
-20 (- 4)	1191	300	349	189	1.64	6.78	6.31	1.59	1.85
-15 (+ 5)	1549	390	454	214	1.86	8.84	7.23	1.82	2.12
-10 (+14)	1969	496	577	240	2.09	11.28	8.19	2.06	2.40

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)	431	109	126	115	1.05	2.44	3.73	0.94	1.09
-30 (-22)	606	153	178	140	1.25	3.44	4.34	1.09	1.27
-25 (-13)	838	211	245	167	1.47	4.76	5.02	1.27	1.47
-20 (- 4)	1127	284	330	196	1.71	6.41	5.76	1.45	1.69
-15 (+ 5)	1476	372	432	226	1.96	8.42	6.53	1.64	1.91
-10 (+14)	1885	475	552	258	2.24	10.80	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)	311	78	91	105	0.95	1.76	2.99	0.75	0.88
-30 (-22)	483	122	142	132	1.18	2.74	3.65	0.92	1.07
-25 (-13)	710	179	208	163	1.43	4.03	4.34	1.09	1.27
-20 (- 4)	992	250	291	196	1.71	5.65	5.05	1.27	1.48
-15 (+ 5)	1333	336	391	231	2.01	7.61	5.76	1.45	1.69
-10 (+14)	1732	437	508	269	2.35	9.92	6.46	1.63	1.89

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F		
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	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		