COMPRESSOR DEFINITION

Designation	**F GS100HA**
Nominal Voltage/Frequency	**220-240 V 50-60 Hz**
Engineering Number	**513200384**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50-60	[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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	-	187 to 255 V
8.2 LBP (43ºC Ambient temperature)	Static	-	187 to 255 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm²] (230 psig)	/ ºC - ºF
9.2 Peak (gauge)	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	9.04	[cm³] (0.552 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	11.61	[kg] (25.60 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M220MD3/8M220MD3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	5(330)	[µF(VAC minimum)]
5 Motor protection	4TM276RFBYY-53	
6 Start winding resistance	10.80	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	8.00	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[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	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V60Hz**			**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]
850	214	249	167	0.97	4.83	5.10	1.29	1.49

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **45ºC (+113ºF))**

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)**	544	137	160	137	0.65	3.08	3.98	1.00	1.17
-30	**(-22)**	790	199	231	162	0.75	4.48	4.85	1.22	1.42
-25	**(-13)**	1052	265	308	189	0.86	5.97	5.59	1.41	1.64
-20	**(- 4)**	1350	340	396	216	0.98	7.68	6.26	1.58	1.83
-15	**(+ 5)**	1706	430	500	246	1.11	9.74	6.94	1.75	2.03
-10	**(+14)**	2140	539	627	277	1.25	12.26	7.69	1.94	2.25

TEST CONDITIONS: **@220V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **55ºC (+131ºF))**

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	131	0.62	2.56	3.46	0.87	1.01
-30	**(-22)**	701	177	205	161	0.74	3.97	4.33	1.09	1.27
-25	**(-13)**	963	243	282	191	0.87	5.47	5.03	1.27	1.47
-20	**(- 4)**	1260	317	369	224	1.01	7.17	5.63	1.42	1.65
-15	**(+ 5)**	1612	406	472	260	1.17	9.20	6.21	1.56	1.82
-10	**(+14)**	2039	514	598	298	1.35	11.68	6.82	1.72	2.00

TEST CONDITIONS: **@220V60Hz** — **ASHRAE32** **Static** — (Condensing temperature **65ºC (+149ºF))**

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)**	355	89	104	123	0.59	2.00	2.88	0.73	0.85
-30	**(-22)**	599	151	176	155	0.71	3.40	3.79	0.96	1.11
-25	**(-13)**	855	216	251	190	0.86	4.86	4.50	1.13	1.32
-20	**(- 4)**	1144	288	335	227	1.02	6.51	5.07	1.28	1.48
-15	**(+ 5)**	1486	375	436	267	1.20	8.48	5.57	1.40	1.63
-10	**(+14)**	1902	479	557	312	1.40	10.90	6.08	1.53	1.78

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 plated steel		
3.1.2 Shape	Slanted		
3.2 DISCHARGE	5 +0.18/-0.06	[mm]	(0.197" +0.007"/-0.002")
3.2.1 Material	Copper plated steel		
3.2.2 Shape	Slanted		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper plated steel		
3.3.2 Shape	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		