

### COMPRESSOR DEFINITION

Designation	<b>F GI85HAK</b>
Nominal Voltage/Frequency	<b>110 V 50 Hz / 115-127 V 60 Hz</b>
Engineering Number	<b>513200401</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	110 / 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	RSIR		
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	93 to 121 V	-
8.2 LBP (43°C Ambient temperature)	Static	93 to 121 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 <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	7.15	[cm <sup>3</sup> ] (0.436 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	18.000	
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)	11.41	[kg] (25.15 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	110 V 50 Hz / 115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	7M4R7MC1/8EA14C1/8M4R7MC1	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM771RFBZZ-53	
6 Start winding resistance	6.65	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.75	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	27.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	4.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @110V50Hz			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]
704	177	206	166	3.11	4.00	4.24	1.07	1.24

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @110V50Hz			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)	374	94	110	116	2.85	2.11	3.21	0.81	0.94
-30 (-22)	514	130	151	135	2.96	2.92	3.80	0.96	1.11
-25 (-13)	698	176	205	156	3.08	3.96	4.47	1.13	1.31
-20 (- 4)	927	234	272	178	3.20	5.28	5.20	1.31	1.52
-15 (+ 5)	1205	304	353	201	3.34	6.88	5.99	1.51	1.75
-10 (+14)	1535	387	450	225	3.50	8.79	6.83	1.72	2.00

TEST CONDITIONS: @110V50Hz			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)	316	80	93	112	2.82	1.79	2.84	0.72	0.83
-30 (-22)	451	114	132	133	2.93	2.56	3.40	0.86	1.00
-25 (-13)	629	159	184	157	3.06	3.57	4.00	1.01	1.17
-20 (- 4)	852	215	250	183	3.21	4.85	4.64	1.17	1.36
-15 (+ 5)	1124	283	329	211	3.39	6.42	5.32	1.34	1.56
-10 (+14)	1447	365	424	240	3.60	8.29	6.04	1.52	1.77

TEST CONDITIONS: @110V50Hz			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)	253	64	74	106	2.79	1.43	2.38	0.60	0.70
-30 (-22)	382	96	112	130	2.90	2.17	2.95	0.74	0.86
-25 (-13)	554	140	162	156	3.04	3.15	3.54	0.89	1.04
-20 (- 4)	771	194	226	186	3.22	4.39	4.15	1.04	1.21
-15 (+ 5)	1036	261	304	217	3.43	5.91	4.77	1.20	1.40
-10 (+14)	1352	341	396	251	3.69	7.74	5.40	1.36	1.58

### 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		