

### COMPRESSOR DEFINITION

Designation	F FU100HAK
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513200932

### 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-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°F)	
5 Motor type	CSIR		
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/Fan	-	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static/Fan	-	103 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/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	1/3	[hp]
2 Displacement	7.95	[cm <sup>3</sup> ] (0.485 cu.in)
2.1 Bore [mm]	22.500	
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 / ISO10	
4 Weight (with oil charge)	10.67	[kg] (23.52 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516094	
3 Start capacitor	233-280(120)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM 771NFBZZ-53	
6 Start winding resistance	7.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.95	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	34.50	[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	IMTRO - TUV - 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]
988	249	290	211	3.03	5.61	4.69	1.18	1.37

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	586	148	172	134	2.73	3.32	4.37	1.10	1.28
-30	(-22)	779	196	228	158	2.80	4.41	4.95	1.25	1.45
-25	(-13)	1025	258	300	179	2.88	5.82	5.74	1.45	1.68
-20	(- 4)	1329	335	389	199	2.97	7.56	6.70	1.69	1.96
-15	(+ 5)	1696	427	497	218	3.06	9.68	7.77	1.96	2.28
-10	(+14)	2131	537	624	239	3.15	12.21	8.89	2.24	2.61
-5	(+23)	2638	665	773	263	3.23	15.18	10.02	2.52	2.94

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)	524	132	153	139	2.68	2.96	3.77	0.95	1.10
-30	(-22)	716	180	210	167	2.78	4.06	4.29	1.08	1.26
-25	(-13)	961	242	282	192	2.91	5.46	5.00	1.26	1.47
-20	(- 4)	1264	318	370	215	3.07	7.19	5.86	1.48	1.72
-15	(+ 5)	1628	410	477	239	3.25	9.29	6.80	1.71	1.99
-10	(+14)	2059	519	603	264	3.43	11.80	7.78	1.96	2.28
-5	(+23)	2562	646	751	294	3.61	14.74	8.73	2.20	2.56

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)	462	116	135	139	2.68	2.61	3.34	0.84	0.98
-30	(-22)	650	164	190	171	2.79	3.68	3.80	0.96	1.11
-25	(-13)	890	224	261	200	2.94	5.05	4.44	1.12	1.30
-20	(- 4)	1186	299	348	228	3.13	6.75	5.19	1.31	1.52
-15	(+ 5)	1544	389	452	257	3.35	8.81	6.01	1.51	1.76
-10	(+14)	1968	496	577	288	3.59	11.27	6.83	1.72	2.00
-5	(+23)	2462	620	721	324	3.85	14.16	7.62	1.92	2.23

### E - PERFORMANCE - CURVES

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)	402	101	118	132	2.75	2.27	3.03	0.76	0.89
-30	(-22)	581	146	170	169	2.82	3.29	3.43	0.87	1.01
-25	(-13)	811	204	238	203	2.96	4.61	3.99	1.00	1.17
-20	(- 4)	1097	277	322	237	3.14	6.24	4.63	1.17	1.36
-15	(+ 5)	1444	364	423	272	3.37	8.24	5.32	1.34	1.56
-10	(+14)	1856	468	544	310	3.63	10.63	6.00	1.51	1.76
-5	(+23)	2338	589	685	353	3.92	13.45	6.62	1.67	1.94

### 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	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		