

### COMPRESSOR DEFINITION

Designation	<b>F FV6HAK</b>
Nominal Voltage/Frequency	<b>220 V 50-60 Hz</b>
Engineering Number	<b>513200444</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220 / 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	RSIR-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	187 to 255 V	187 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	187 to 255 V	187 to 242 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 <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	6.23	[cm <sup>3</sup> ] (0.380 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	18.000	
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)	10.79	[kg] (23.79 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	220 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516159/213516353	
3 Start capacitor	64-77(220)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM302KFBYY-53	
6 Start winding resistance	33.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	11.25	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	12.30/11.70	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	1.60/1.45	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	1.87/1.71	[A] - Measured according to UL 984
11 Approval boards certification		

### 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]
570	144	167	122	1.06	3.24	4.67	1.18	1.37

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]
675	170	198	139	0.99	3.84	4.86	1.22	1.42

### E - PERFORMANCE - CURVES

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)	303	76	89	86	1.00	1.71	3.50	0.88	1.02
-30 (-22)	415	104	122	99	1.03	2.35	4.22	1.06	1.24
-25 (-13)	562	142	165	113	1.07	3.19	4.99	1.26	1.46
-20 (- 4)	748	189	219	129	1.10	4.26	5.82	1.47	1.70
-15 (+ 5)	978	246	286	145	1.13	5.58	6.73	1.70	1.97
-10 (+14)	1253	316	367	161	1.18	7.18	7.77	1.96	2.28

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)	237	60	69	80	0.99	1.34	2.97	0.75	0.87
-30 (-22)	357	90	105	97	1.03	2.03	3.68	0.93	1.08
-25 (-13)	508	128	149	116	1.06	2.88	4.38	1.10	1.28
-20 (- 4)	692	174	203	135	1.11	3.94	5.10	1.28	1.49
-15 (+ 5)	913	230	268	156	1.16	5.21	5.86	1.48	1.72
-10 (+14)	1175	296	344	176	1.22	6.73	6.68	1.68	1.96

### 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)	165	42	48	70	0.98	0.93	2.35	0.59	0.69	
-30 (-22)	280	71	82	91	1.02	1.59	3.05	0.77	0.89	
-25 (-13)	420	106	123	113	1.06	2.39	3.69	0.93	1.08	
-20 (- 4)	589	148	173	137	1.11	3.35	4.31	1.09	1.26	
-15 (+ 5)	789	199	231	161	1.17	4.50	4.92	1.24	1.44	
-10 (+14)	1025	258	300	186	1.24	5.87	5.54	1.40	1.62	

TEST CONDITIONS: @220V60Hz		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)	352	89	103	92	0.86	1.99	3.82	0.96	1.12	
-30 (-22)	508	128	149	112	0.91	2.88	4.54	1.14	1.33	
-25 (-13)	695	175	204	132	0.97	3.95	5.27	1.33	1.55	
-20 (- 4)	921	232	270	152	1.04	5.24	6.04	1.52	1.77	
-15 (+ 5)	1192	300	349	174	1.11	6.81	6.84	1.72	2.00	
-10 (+14)	1516	382	444	196	1.19	8.69	7.71	1.94	2.26	

TEST CONDITIONS: @220V60Hz		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)	280	71	82	86	0.84	1.58	3.24	0.82	0.95	
-30 (-22)	425	107	125	109	0.90	2.41	3.93	0.99	1.15	
-25 (-13)	601	152	176	132	0.97	3.41	4.60	1.16	1.35	
-20 (- 4)	815	205	239	156	1.05	4.64	5.26	1.33	1.54	
-15 (+ 5)	1073	270	314	181	1.14	6.12	5.93	1.49	1.74	
-10 (+14)	1383	348	405	208	1.24	7.92	6.61	1.67	1.94	

TEST CONDITIONS: @220V60Hz		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)	178	45	52	74	0.81	1.01	2.42	0.61	0.71	
-30 (-22)	326	82	95	100	0.88	1.85	3.20	0.81	0.94	
-25 (-13)	503	127	147	127	0.96	2.86	3.92	0.99	1.15	
-20 (- 4)	717	181	210	156	1.05	4.08	4.60	1.16	1.35	
-15 (+ 5)	975	246	286	186	1.16	5.56	5.25	1.32	1.54	
-10 (+14)	1283	323	376	219	1.28	7.35	5.88	1.48	1.72	

### 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		