

COMPRESSOR DEFINITION

Designation	F F6HBKW
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513200101

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-Medium-High Back Pressure		
4.1 Evaporating temperature range	-35°C to 15°C	(-31°F to 59°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	-	103 to 135 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 135 V
8.3 HBP (32°C Ambient temperature)	Fan	-	103 to 135 V
8.4 HBP (43°C Ambient temperature)	Fan	-	103 to 135 V
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	1/5	[hp]
2 Displacement	6.23	[cm ³] (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 / ISO22	
4 Weight (with oil charge)	10.72	[kg] (23.63 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	Current Relay	
2.1 Starting device	213516060/213516124	
3 Start capacitor	270-324(115)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MSP36ALK-5590	
6 Start winding resistance	10.55	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.29	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	27.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.20	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	3.80	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			ASHRAEHBP32 Static		Evaporating temperature (Condensing temperature)		7.2°C (44.96°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]	
2520	635	738	317	3.30		7.95	2.00	2.33	

TEST CONDITIONS: @115V60Hz			ASHRAEHBP32 Fan		Evaporating temperature (Condensing temperature)		7.2°C (44.96°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]	
2520	635	738	317	3.30		7.95	2.00	2.33	

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]	
570	144	167	153	2.12	3.24	3.73	0.94	1.09	

TEST CONDITIONS: @115V60Hz			ASHRAELBP32 Fan		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	153	2.12	3.24	3.73	0.94	1.09	

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]
-35	(-31)	302	76	88	107	1.87	1.71	2.53	0.64	0.74
-30	(-22)	381	96	112	124	1.95	2.16	3.10	0.78	0.91
-25	(-13)	515	130	151	143	2.05	2.92	3.74	0.94	1.10
-20	(- 4)	705	178	206	163	2.16	4.00	4.46	1.12	1.31
-15	(+ 5)	949	239	278	185	2.30	5.41	5.25	1.32	1.54
-10	(+14)	1249	315	366	207	2.45	7.14	6.10	1.54	1.79
-5	(+23)	1603	404	470	229	2.61	9.21	7.01	1.77	2.06
0	(+32)	2011	507	589	252	2.77	11.63	7.98	2.01	2.34
+5	(+41)	2473	623	725	274	2.94	14.40	9.01	2.27	2.64
+10	(+50)	2989	753	876	296	3.11	17.52	10.08	2.54	2.95
+15	(+59)	3559	897	1043	317	3.27	21.01	11.20	2.82	3.28

E - PERFORMANCE - CURVES

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)	210	53	61	104	1.88	1.18	2.14	0.54	0.63	
-30 (-22)	321	81	94	123	1.96	1.83	2.73	0.69	0.80	
-25 (-13)	478	121	140	145	2.07	2.72	3.36	0.85	0.98	
-20 (- 4)	680	171	199	169	2.21	3.87	4.02	1.01	1.18	
-15 (+ 5)	925	233	271	194	2.37	5.28	4.71	1.19	1.38	
-10 (+14)	1215	306	356	221	2.55	6.96	5.43	1.37	1.59	
-5 (+23)	1549	390	454	248	2.75	8.91	6.17	1.55	1.81	
0 (+32)	1926	485	564	276	2.97	11.14	6.93	1.75	2.03	
+5 (+41)	2346	591	688	304	3.19	13.66	7.70	1.94	2.26	
+10 (+50)	2810	708	823	332	3.42	16.47	8.49	2.14	2.49	
+15 (+59)	3316	836	972	359	3.65	19.58	9.28	2.34	2.72	

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)	191	48	56	101	1.86	1.07	2.00	0.50	0.59	
-30 (-22)	314	79	92	122	1.94	1.79	2.59	0.65	0.76	
-25 (-13)	471	119	138	146	2.06	2.69	3.18	0.80	0.93	
-20 (- 4)	662	167	194	172	2.21	3.78	3.77	0.95	1.10	
-15 (+ 5)	887	224	260	201	2.39	5.07	4.34	1.09	1.27	
-10 (+14)	1145	289	336	231	2.60	6.56	4.91	1.24	1.44	
-5 (+23)	1436	362	421	262	2.83	8.26	5.46	1.38	1.60	
0 (+32)	1761	444	516	295	3.09	10.17	5.99	1.51	1.76	
+5 (+41)	2117	534	620	328	3.36	12.31	6.50	1.64	1.90	
+10 (+50)	2507	632	734	361	3.64	14.68	6.98	1.76	2.04	
+15 (+59)	2928	738	858	395	3.93	17.28	7.42	1.87	2.18	

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 plated steel		
3.1.2 Shape	Slanted		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
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)	6.5 +0.09/-0.09	[mm]	(0.256" +0.004"/-0.004")
3.5 Connector sealing	Rubber Plugs		