

COMPRESSOR DEFINITION

Designation	F F11,5BK
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513200278

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	Blend		
3 Nominal voltage and frequency	220 / 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)	Fan	-	198 to 242 V
8.2 LBP (43°C Ambient temperature)	Fan	-	198 to 242 V
8.3 HBP (32°C Ambient temperature)	Fan	-	198 to 242 V
8.4 HBP (43°C Ambient temperature)	Fan	-	198 to 242 V
9 Maximum condensing temperature			
9.1 Operating	14.5	[kgf/cm ²] (206 psig)	/ °C - °F
9.2 Peak	18.2	[kgf/cm ²] (259 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	11.14	[cm ³] (0.680 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	21.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO32	
4 Weight (with oil charge)	11.29	[kg] (24.89 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	220 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516450/213516477	
3 Start capacitor	124-149(130)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRP36ALK-5590	
6 Start winding resistance	19.55	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	6.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	22.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.45	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	1.65	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			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]
4000	1008	1172	578	3.15	29.95	6.92	1.74	2.03

TEST CONDITIONS: @220V60Hz			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]
1130	285	331	294	2.13	8.27	3.85	0.97	1.13

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			ASHRAE32 Fan		(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)	909	229	266	268	1.98	6.62	3.38	0.85	0.99
-30 (-22)	999	252	293	271	2.02	7.30	3.76	0.95	1.10
-25 (-13)	1181	298	346	286	2.10	8.65	4.19	1.06	1.23
-20 (- 4)	1450	365	425	312	2.20	10.63	4.66	1.17	1.36
-15 (+ 5)	1800	454	527	347	2.33	13.22	5.15	1.30	1.51
-10 (+14)	2223	560	651	390	2.48	16.38	5.65	1.42	1.66
-5 (+23)	2715	684	796	440	2.65	20.09	6.15	1.55	1.80
0 (+32)	3269	824	958	494	2.84	24.30	6.63	1.67	1.94
+5 (+41)	3880	978	1137	552	3.05	28.99	7.07	1.78	2.07
+10 (+50)	4540	1144	1330	612	3.27	34.12	7.46	1.88	2.19
+15 (+59)	5245	1322	1537	671	3.50	39.66	7.79	1.96	2.28

TEST CONDITIONS: @220V60Hz			ASHRAE32 Fan		(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)	757	191	222	268	1.98	5.52	2.81	0.71	0.82
-30 (-22)	853	215	250	271	2.02	6.24	3.23	0.81	0.95
-25 (-13)	1039	262	304	286	2.10	7.61	3.70	0.93	1.08
-20 (- 4)	1309	330	384	312	2.20	9.60	4.21	1.06	1.23
-15 (+ 5)	1657	418	486	347	2.33	12.18	4.74	1.19	1.39
-10 (+14)	2077	524	609	390	2.48	15.31	5.27	1.33	1.54
-5 (+23)	2564	646	751	440	2.65	18.97	5.80	1.46	1.70
0 (+32)	3110	784	911	494	2.84	23.12	6.30	1.59	1.85
+5 (+41)	3711	935	1087	552	3.05	27.72	6.76	1.70	1.98
+10 (+50)	4359	1098	1277	612	3.27	32.76	7.17	1.81	2.10
+15 (+59)	5049	1272	1480	671	3.50	38.18	7.51	1.89	2.20

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		ASHRAE32 Fan			(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)	598	151	175	268	1.98	4.36	2.22	0.56	0.65
-30	(-22)	701	177	205	271	2.02	5.13	2.68	0.68	0.79
-25	(-13)	892	225	261	286	2.10	6.54	3.20	0.81	0.94
-20	(- 4)	1165	294	341	312	2.20	8.55	3.75	0.94	1.10
-15	(+ 5)	1514	382	444	347	2.33	11.13	4.32	1.09	1.26
-10	(+14)	1933	487	566	390	2.48	14.25	4.88	1.23	1.43
-5	(+23)	2415	609	708	440	2.65	17.87	5.44	1.37	1.59
0	(+32)	2956	745	866	494	2.84	21.97	5.97	1.50	1.75
+5	(+41)	3548	894	1040	552	3.05	26.51	6.46	1.63	1.89
+10	(+50)	4185	1055	1226	612	3.27	31.46	6.89	1.74	2.02
+15	(+59)	4863	1225	1425	671	3.50	36.78	7.25	1.83	2.12

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)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		