

COMPRESSOR DEFINITION

Designation	F F7,5BKW
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513200670

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)	Static	-	198 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	-	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 pressures/temperature			
9.1 Operating (gauge)	14.5	[kgf/cm ²] (206 psig)	/ °C - °F
9.2 Peak (gauge)	18.2	[kgf/cm ²] (259 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5+	[hp]
2 Displacement	6.92	[cm ³] (0.422 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	20.000	
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)	10.8	[kg] (23.81 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	213516078/213516086	
3 Start capacitor	88-108(150)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRA58131-5590	
6 Start winding resistance	38.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	8.30	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	13.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	2.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			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]
2550	643	747	374	1.94	19.09	6.83	1.72	2.00

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]
735	185	215	192	1.25	5.38	3.83	0.97	1.12

E - PERFORMANCE - CURVES

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)	421	106	123	139	1.07	3.06	3.03	0.76	0.89
-30 (-22)	587	148	172	161	1.14	4.30	3.58	0.90	1.05
-25 (-13)	760	192	223	185	1.22	5.57	4.07	1.03	1.19
-20 (- 4)	951	240	279	210	1.31	6.97	4.53	1.14	1.33
-15 (+ 5)	1169	295	343	236	1.41	8.59	4.99	1.26	1.46
-10 (+14)	1427	360	418	263	1.52	10.51	5.46	1.38	1.60
-5 (+23)	1733	437	508	291	1.64	12.81	5.97	1.51	1.75
0 (+32)	2099	529	615	320	1.76	15.60	6.56	1.65	1.92
+5 (+41)	2536	639	743	349	1.88	18.95	7.23	1.82	2.12
+10 (+50)	3053	769	895	379	2.01	22.95	8.03	2.02	2.35
+15 (+59)	3662	923	1073	409	2.15	27.69	8.96	2.26	2.63

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)	351	89	103	139	1.07	2.55	2.60	0.66	0.76
-30 (-22)	523	132	153	161	1.14	3.83	3.20	0.81	0.94
-25 (-13)	700	176	205	185	1.22	5.13	3.73	0.94	1.09
-20 (- 4)	892	225	261	210	1.31	6.54	4.22	1.06	1.24
-15 (+ 5)	1109	279	325	236	1.41	8.15	4.70	1.18	1.38
-10 (+14)	1363	343	399	263	1.52	10.04	5.19	1.31	1.52
-5 (+23)	1664	419	487	291	1.64	12.30	5.72	1.44	1.68
0 (+32)	2022	510	592	320	1.76	15.03	6.31	1.59	1.85
+5 (+41)	2448	617	717	349	1.88	18.30	6.99	1.76	2.05
+10 (+50)	2954	744	865	379	2.01	22.20	7.77	1.96	2.28
+15 (+59)	3548	894	1040	409	2.15	26.83	8.69	2.19	2.55

E - PERFORMANCE - CURVES

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)	318	80	93	139	1.07	2.31	2.31	0.58	0.68
-30	(-22)	482	121	141	161	1.14	3.53	2.91	0.73	0.85
-25	(-13)	649	164	190	185	1.22	4.76	3.44	0.87	1.01
-20	(- 4)	829	209	243	210	1.31	6.08	3.93	0.99	1.15
-15	(+ 5)	1032	260	302	236	1.41	7.58	4.39	1.11	1.29
-10	(+14)	1269	320	372	263	1.52	9.35	4.86	1.23	1.43
-5	(+23)	1551	391	455	291	1.64	11.47	5.37	1.35	1.57
0	(+32)	1889	476	553	320	1.76	14.04	5.92	1.49	1.73
+5	(+41)	2292	578	672	349	1.88	17.13	6.55	1.65	1.92
+10	(+50)	2772	698	812	379	2.01	20.84	7.29	1.84	2.14
+15	(+59)	3339	841	978	409	2.15	25.25	8.16	2.06	2.39

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	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)	4.9 +0.02/-0.05	[mm]	(0.193" +0.001"/-0.002")
3.5 Connector sealing	Rubber Plugs		