

COMPRESSOR DEFINITION

Designation	F F7,5BK
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513200800

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)	10.68	[kg] (23.54 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	108-130(175)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM739LFBYY-53	
6 Start winding resistance	34.70	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.45	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	14.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	1.85	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	2.15	[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]
2600	655	762	360	2.03	19.47	7.22	1.82	2.12

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	194	1.36	5.38	3.79	0.96	1.11

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)	458	116	134	139	1.07	3.34	3.23	0.81	0.95
-30 (-22)	506	128	148	161	1.14	3.70	3.28	0.83	0.96
-25 (-13)	632	159	185	185	1.22	4.62	3.55	0.89	1.04
-20 (- 4)	825	208	242	210	1.31	6.05	3.98	1.00	1.17
-15 (+ 5)	1077	271	315	236	1.41	7.91	4.53	1.14	1.33
-10 (+14)	1376	347	403	263	1.52	10.14	5.16	1.30	1.51
-5 (+23)	1714	432	502	291	1.64	12.68	5.83	1.47	1.71
0 (+32)	2080	524	610	320	1.76	15.46	6.48	1.63	1.90
+5 (+41)	2465	621	722	349	1.88	18.41	7.08	1.78	2.08
+10 (+50)	2858	720	838	379	2.01	21.47	7.59	1.91	2.22
+15 (+59)	3250	819	952	409	2.15	24.57	7.95	2.00	2.33

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)	458	116	134	139	1.07	3.34	3.23	0.81	0.95
-30 (-22)	506	128	148	161	1.14	3.70	3.28	0.83	0.96
-25 (-13)	632	159	185	185	1.22	4.62	3.55	0.89	1.04
-20 (- 4)	825	208	242	210	1.31	6.05	3.98	1.00	1.17
-15 (+ 5)	1077	271	315	236	1.41	7.91	4.53	1.14	1.33
-10 (+14)	1376	347	403	263	1.52	10.15	5.16	1.30	1.51
-5 (+23)	1714	432	502	291	1.64	12.68	5.83	1.47	1.71
0 (+32)	2080	524	610	320	1.76	15.46	6.48	1.63	1.90
+5 (+41)	2465	621	722	349	1.88	18.42	7.08	1.78	2.08
+10 (+50)	2858	720	838	379	2.01	21.48	7.59	1.91	2.22
+15 (+59)	3250	819	952	409	2.15	24.58	7.95	2.00	2.33

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)	458	116	134	139	1.07	3.34	3.23	0.81	0.95
-30	(-22)	506	128	148	161	1.14	3.70	3.28	0.83	0.96
-25	(-13)	632	159	185	185	1.22	4.62	3.55	0.89	1.04
-20	(- 4)	825	208	242	210	1.31	6.05	3.98	1.00	1.17
-15	(+ 5)	1077	271	315	236	1.41	7.91	4.53	1.14	1.33
-10	(+14)	1376	347	403	263	1.52	10.15	5.16	1.30	1.51
-5	(+23)	1714	432	502	291	1.64	12.69	5.83	1.47	1.71
0	(+32)	2080	524	610	320	1.76	15.47	6.48	1.63	1.90
+5	(+41)	2465	621	722	349	1.88	18.42	7.08	1.78	2.08
+10	(+50)	2858	720	838	379	2.01	21.48	7.59	1.91	2.22
+15	(+59)	3250	819	952	409	2.15	24.58	7.95	2.00	2.33

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		