

COMPRESSOR DEFINITION

Designation	F F7,5BKW
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513200204

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	Blend		
3 Nominal voltage and frequency	115-127 / 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 140 V
8.2 LBP (43°C Ambient temperature)	Static	-	103 to 140 V
8.3 HBP (32°C Ambient temperature)	Fan	-	103 to 140 V
8.4 HBP (43°C Ambient temperature)	Fan	-	103 to 140 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	1/5+	[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)	10.81	[kg] (23.83 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516094/213516132	
3 Start capacitor	270-324(115)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRT30AIK-5590	
6 Start winding resistance	11.51	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	25.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	4.00	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - 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]
2600	655	762	368	3.68		7.06	1.78	2.07

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]
735	185	215	192	2.40	5.38	3.83	0.97	1.12

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]	[W/W]
-35 (-31)	421	106	123		0.00	3.06	0.00	0.00	0.00
-30 (-22)	587	148	172		0.00	4.30	0.00	0.00	0.00
-25 (-13)	760	192	223		0.00	5.57	0.00	0.00	0.00
-20 (- 4)	951	240	279		0.00	6.97	0.00	0.00	0.00
-15 (+ 5)	1169	295	343		0.00	8.59	0.00	0.00	0.00
-10 (+14)	1427	360	418		0.00	10.51	0.00	0.00	0.00
-5 (+23)	1733	437	508		0.00	12.81	0.00	0.00	0.00
0 (+32)	2099	529	615		0.00	15.60	0.00	0.00	0.00
+5 (+41)	2536	639	743		0.00	18.95	0.00	0.00	0.00
+10 (+50)	3053	769	895		0.00	22.95	0.00	0.00	0.00
+15 (+59)	3662	923	1073		0.00	27.69	0.00	0.00	0.00

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)	351	89	103		0.00	2.55	0.00	0.00	0.00
-30 (-22)	523	132	153		0.00	3.83	0.00	0.00	0.00
-25 (-13)	700	176	205		0.00	5.13	0.00	0.00	0.00
-20 (- 4)	892	225	261		0.00	6.54	0.00	0.00	0.00
-15 (+ 5)	1109	279	325		0.00	8.15	0.00	0.00	0.00
-10 (+14)	1363	343	399		0.00	10.04	0.00	0.00	0.00
-5 (+23)	1664	419	487		0.00	12.30	0.00	0.00	0.00
0 (+32)	2022	510	592		0.00	15.03	0.00	0.00	0.00
+5 (+41)	2448	617	717		0.00	18.30	0.00	0.00	0.00
+10 (+50)	2954	744	865		0.00	22.20	0.00	0.00	0.00
+15 (+59)	3548	894	1040		0.00	26.83	0.00	0.00	0.00

E - PERFORMANCE - CURVES

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)	318	80	93		0.00	2.31	0.00	0.00	0.00
-30	(-22)	482	121	141		0.00	3.53	0.00	0.00	0.00
-25	(-13)	649	164	190		0.00	4.76	0.00	0.00	0.00
-20	(- 4)	829	209	243		0.00	6.08	0.00	0.00	0.00
-15	(+ 5)	1032	260	302		0.00	7.58	0.00	0.00	0.00
-10	(+14)	1269	320	372		0.00	9.35	0.00	0.00	0.00
-5	(+23)	1551	391	455		0.00	11.47	0.00	0.00	0.00
0	(+32)	1889	476	553		0.00	14.04	0.00	0.00	0.00
+5	(+41)	2292	578	672		0.00	17.13	0.00	0.00	0.00
+10	(+50)	2772	698	812		0.00	20.84	0.00	0.00	0.00
+15	(+59)	3339	841	978		0.00	25.25	0.00	0.00	0.00

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F		
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 plated steel		
3.1.2 Shape	Slanted		
3.2 DISCHARGE	5 +0.18/-0.06	[mm]	(0.197" +0.007"/-0.002")
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)	5.1 +0.10/+0.00	[mm]	(0.201" +0.004"/+0.000")
3.5 Connector sealing	Rubber Plugs		