

COMPRESSOR DEFINITION

Designation	F F7,5HBKW
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513200815

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	6.92	[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	ESTER / ISO22	
4 Weight (with oil charge)	10.79	[kg] (23.79 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	189-227(110)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRT30AIK-5590	
6 Start winding resistance	10.35	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.65	[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)	3.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	3.90	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - UL	

D - PERFORMANCE - CHECK POINT DATA

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]	
2940	741	861	384	3.99		7.66	1.93	2.24	

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]	
695	175	204	178	2.44	3.95	3.90	0.98	1.14	

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]	
695	175	204	178	2.44	3.95	3.90	0.98	1.14	

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)	344	87	101	120	2.15	1.95	2.76	0.69	0.81
-30	(-22)	489	123	143	143	2.26	2.78	3.40	0.86	1.00
-25	(-13)	665	168	195	167	2.39	3.78	4.01	1.01	1.18
-20	(- 4)	880	222	258	193	2.54	5.01	4.62	1.16	1.35
-15	(+ 5)	1141	287	334	221	2.72	6.50	5.24	1.32	1.53
-10	(+14)	1455	367	426	249	2.91	8.32	5.89	1.48	1.73
-5	(+23)	1830	461	536	278	3.11	10.52	6.60	1.66	1.93
0	(+32)	2274	573	666	308	3.33	13.15	7.38	1.86	2.16
+5	(+41)	2793	704	818	337	3.57	16.26	8.26	2.08	2.42
+10	(+50)	3395	856	995	365	3.81	19.90	9.25	2.33	2.71
+15	(+59)	4088	1030	1198	393	4.07	24.14	10.38	2.62	3.04

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)	268	67	78	118	2.16	1.51	2.34	0.59	0.68
-30	(-22)	429	108	126	141	2.26	2.44	3.02	0.76	0.88
-25	(-13)	615	155	180	168	2.39	3.50	3.64	0.92	1.07
-20	(- 4)	832	210	244	197	2.56	4.74	4.21	1.06	1.23
-15	(+ 5)	1087	274	318	228	2.76	6.20	4.76	1.20	1.39
-10	(+14)	1388	350	407	261	2.98	7.94	5.30	1.34	1.55
-5	(+23)	1743	439	511	296	3.24	10.02	5.87	1.48	1.72
0	(+32)	2158	544	632	332	3.52	12.48	6.47	1.63	1.90
+5	(+41)	2642	666	774	368	3.83	15.37	7.13	1.80	2.09
+10	(+50)	3202	807	938	406	4.16	18.76	7.88	1.98	2.31
+15	(+59)	3844	969	1126	443	4.51	22.69	8.72	2.20	2.55

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)	196	50	58	105	2.08	1.10	1.97	0.50	0.58
-30	(-22)	366	92	107	132	2.19	2.09	2.67	0.67	0.78
-25	(-13)	552	139	162	163	2.35	3.15	3.28	0.83	0.96
-20	(- 4)	761	192	223	197	2.55	4.34	3.80	0.96	1.11
-15	(+ 5)	1002	252	294	235	2.80	5.72	4.26	1.07	1.25
-10	(+14)	1281	323	375	275	3.09	7.33	4.68	1.18	1.37
-5	(+23)	1606	405	471	318	3.41	9.23	5.09	1.28	1.49
0	(+32)	1985	500	582	363	3.78	11.47	5.49	1.38	1.61
+5	(+41)	2424	611	710	410	4.18	14.10	5.92	1.49	1.74
+10	(+50)	2932	739	859	458	4.62	17.18	6.39	1.61	1.87
+15	(+59)	3515	886	1030	507	5.09	20.75	6.93	1.75	2.03

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F		
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		