

### COMPRESSOR DEFINITION

Designation	F F112BX
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513208863

### 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 Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	CSIR		
6 Starting torque	HST - High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Fan	-	103 to 135 V
8.2 LBP (43°C Ambient temperature)	Fan	-	103 to 135 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.5	[kgf/cm <sup>2</sup> ] (206 psig)	/ °C - °F
9.2 Peak	18.2	[kgf/cm <sup>2</sup> ] (259 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/3+	[hp]
2 Displacement	11.14	[cm <sup>3</sup> ] (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)	11.25	[kg] (24.80 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELECTRICAL 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	213516051	
3 Start capacitor	378-454(115)/233-280(150)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRT16AFZ-5590	
6 Start winding resistance	3.87	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.04	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	48.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	13.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - TUV - 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]	
5000	1260	1465	577	6.80	37.44	8.67	2.18	2.54	

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]	
1350	340	396	340	4.40	9.88	3.97	1.00	1.16	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			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)	1019	257	299	273	5.10	7.42	3.76	0.95	1.10
-30 (-22)	1157	292	339	294	5.15	8.46	4.00	1.01	1.17
-25 (-13)	1408	355	412	321	5.25	10.31	4.41	1.11	1.29
-20 (- 4)	1761	444	516	353	5.38	12.92	4.96	1.25	1.45
-15 (+ 5)	2209	557	647	391	5.56	16.23	5.59	1.41	1.64
-10 (+14)	2743	691	804	434	5.78	20.22	6.28	1.58	1.84

TEST CONDITIONS: @115V60Hz			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)	965	243	283	279	5.07	7.03	3.41	0.86	1.00
-30 (-22)	1058	267	310	301	5.10	7.73	3.56	0.90	1.04
-25 (-13)	1271	320	373	329	5.19	9.31	3.90	0.98	1.14
-20 (- 4)	1598	403	468	364	5.32	11.72	4.39	1.11	1.29
-15 (+ 5)	2028	511	594	403	5.50	14.90	4.99	1.26	1.46
-10 (+14)	2553	643	748	448	5.74	18.81	5.65	1.42	1.66

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	829	209	243	284	4.99	6.04	2.90	0.73	0.85
-30	(-22)	882	222	259	308	5.04	6.45	2.96	0.75	0.87
-25	(-13)	1066	269	312	339	5.13	7.81	3.24	0.82	0.95
-20	(- 4)	1372	346	402	376	5.29	10.06	3.68	0.93	1.08
-15	(+ 5)	1791	451	525	418	5.51	13.16	4.25	1.07	1.25
-10	(+14)	2315	583	678	466	5.79	17.06	4.90	1.24	1.44

### F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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	Straight		
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	Straight		
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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		