

### COMPRESSOR DEFINITION

Designation	F F112BX
Nominal Voltage/Frequency	220 V 60 Hz
Engineering Number	513200140

### 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	Medium Back Pressure		
4.1 Evaporating temperature range	-20°C to 0°C	(-4°F to 32°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)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	14.5	[kgf/cm <sup>2</sup> ] (206 psig)	/ °C - °F
9.2 Peak (gauge)	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)	11.14	[kg] (24.56 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (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	213516485	
3 Start capacitor	64-77(250)/124-149(180)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MSP36ALZ-5590	
6 Start winding resistance	14.55	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.69	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	26.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	4.50	[A] - Measured according to UL 984
11 Approval boards certification	TUV	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V60Hz			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]
4838	1219	1418	623	3.68	36.22	7.77	1.96	2.28

TEST CONDITIONS: @220V60Hz			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]
1305	329	382	334	2.82	9.55	3.91	0.99	1.15

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			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]
-20 (- 4)	1549	390	454	351	2.90	11.35	4.44	1.12	1.30
-15 (+ 5)	1963	495	575	389	2.99	14.42	5.06	1.27	1.48
-10 (+14)	2453	618	719	430	3.09	18.07	5.70	1.44	1.67
-5 (+23)	3024	762	886	475	3.22	22.37	6.35	1.60	1.86
0 (+32)	3684	928	1079	525	3.37	27.38	6.99	1.76	2.05

TEST CONDITIONS: @220V60Hz			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]
-20 (- 4)	1467	370	430	364	2.83	10.76	4.04	1.02	1.18
-15 (+ 5)	1876	473	550	405	2.94	13.78	4.63	1.17	1.36
-10 (+14)	2358	594	691	450	3.07	17.37	5.23	1.32	1.53
-5 (+23)	2919	735	855	499	3.22	21.59	5.84	1.47	1.71
0 (+32)	3564	898	1044	553	3.42	26.49	6.44	1.62	1.89

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		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]
-20	(- 4)	1389	350	407	369	2.98	10.19	3.74	0.94	1.10
-15	(+ 5)	1793	452	525	418	3.07	13.17	4.27	1.08	1.25
-10	(+14)	2267	571	664	471	3.19	16.70	4.81	1.21	1.41
-5	(+23)	2817	710	825	528	3.34	20.84	5.35	1.35	1.57
0	(+32)	3449	869	1011	590	3.54	25.63	5.87	1.48	1.72

### 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		
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		
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		
3.3.2 Shape	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		