

COMPRESSOR DEFINITION

Designation	F F112HAX
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	513200343

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	CSIR		
6 Starting torque	HST - Hight 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 127 V
8.2 LBP (43°C Ambient temperature)	Fan	-	103 to 127 V
8.3 HBP (32°C Ambient temperature)	Fan	-	103 to 127 V
8.4 HBP (43°C Ambient temperature)	Fan	-	103 to 127 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	1/3+	[hp]
2 Displacement	11.14	[cm ³] (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	ESTER / ISO22	
4 Weight (with oil charge)	11.46	[kg] (25.26 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	213516051	
3 Start capacitor	378-454(150)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRT26AFZ-5590	
6 Start winding resistance	3.75	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.10	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	41.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	8.50	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	9.50	[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]
5377	1355	1576	616	6.49		8.73	2.20	2.56

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]
1363	343	399	299	4.64	7.74	4.56	1.15	1.34

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)	695	175	204	200	4.23	3.93	3.39	0.85	0.99
-30 (-22)	951	240	279	238	4.32	5.41	4.02	1.01	1.18
-25 (-13)	1274	321	373	276	4.47	7.25	4.69	1.18	1.37
-20 (- 4)	1672	421	490	314	4.66	9.51	5.39	1.36	1.58
-15 (+ 5)	2152	542	631	354	4.88	12.27	6.13	1.55	1.80
-10 (+14)	2723	686	798	396	5.15	15.58	6.91	1.74	2.02
-5 (+23)	3393	855	994	439	5.44	19.51	7.71	1.94	2.26
0 (+32)	4170	1051	1222	486	5.75	24.11	8.54	2.15	2.50
+5 (+41)	5062	1276	1483	536	6.08	29.46	9.39	2.37	2.75
+10 (+50)	6077	1531	1781	590	6.43	35.62	10.26	2.59	3.01
+15 (+59)	7224	1820	2117	648	6.78	42.64	11.16	2.81	3.27

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)	549	138	161	190	4.26	3.10	2.92	0.74	0.86
-30 (-22)	826	208	242	231	4.34	4.70	3.57	0.90	1.05
-25 (-13)	1163	293	341	274	4.49	6.62	4.24	1.07	1.24
-20 (- 4)	1568	395	459	318	4.69	8.93	4.92	1.24	1.44
-15 (+ 5)	2048	516	600	364	4.95	11.68	5.62	1.42	1.65
-10 (+14)	2612	658	765	412	5.25	14.95	6.32	1.59	1.85
-5 (+23)	3268	823	957	463	5.59	18.79	7.03	1.77	2.06
0 (+32)	4023	1014	1179	518	5.97	23.26	7.74	1.95	2.27
+5 (+41)	4887	1232	1432	577	6.37	28.44	8.45	2.13	2.48
+10 (+50)	5867	1478	1719	641	6.80	34.38	9.16	2.31	2.68
+15 (+59)	6971	1757	2043	710	7.25	41.15	9.86	2.49	2.89

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)	453	114	133	185	4.24	2.56	2.48	0.62	0.73
-30	(-22)	733	185	215	230	4.32	4.17	3.14	0.79	0.92
-25	(-13)	1064	268	312	277	4.49	6.06	3.80	0.96	1.11
-20	(- 4)	1456	367	427	326	4.72	8.30	4.45	1.12	1.30
-15	(+ 5)	1917	483	562	377	5.01	10.94	5.08	1.28	1.49
-10	(+14)	2455	619	719	432	5.36	14.04	5.70	1.44	1.67
-5	(+23)	3077	775	902	490	5.76	17.68	6.30	1.59	1.85
0	(+32)	3792	956	1111	553	6.21	21.92	6.89	1.74	2.02
+5	(+41)	4609	1161	1350	621	6.70	26.81	7.44	1.88	2.18
+10	(+50)	5534	1395	1622	694	7.22	32.42	7.98	2.01	2.34
+15	(+59)	6576	1657	1927	773	7.78	38.82	8.48	2.14	2.49

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