

COMPRESSOR DEFINITION

Designation	FMX A6C
Nominal Voltage/Frequency	230 V 43 -134 Hz
Engineering Number	513908038

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	230 / 43 -134	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Fullmotion Compressors)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°F)	
5 Motor type	BPM		
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)	-	-	-
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)	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak (gauge)	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3	[hp]
2 Displacement	6.23	[cm ³] (0.380 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	18.000	
3 Lubricant charge	175	[ml] (5.92 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	4.8	[kg] (10.58 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	230 V 43-134 Hz 3~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	CF02E01 M 0.0 X	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	INVERTER FMX CF02E01	
6 Start winding resistance	20.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	20.00	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (43 /134 Hz)	1.70	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (43 /134 Hz)	1.70	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (43 /134 Hz)	1.70	[A] - Measured according to UL 984
11 Approval boards certification	CCC	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V1300RPM			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]
136	34	40	24	0.22	0.43	5.69	1.43	1.67

TEST CONDITIONS: @220V2000RPM			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]
222	56	65	36	0.30	0.70	6.10	1.54	1.79

TEST CONDITIONS: @220V3000RPM			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]
333	84	98	54	0.43	1.05	6.14	1.55	1.80

TEST CONDITIONS: @220V4000RPM			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]
413	104	121	71	0.55	1.30	5.80	1.46	1.70

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1300RPM		ASHRAE32 Static				(Condensing temperature 35°C (+95°F))			
Evaporating temperature	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]
°C (°F)									
-35 (-31)	79	20	23	14	0.16	0.25	5.52	1.39	1.62
-30 (-22)	113	29	33	17	0.18	0.35	6.58	1.66	1.93
-25 (-13)	154	39	45	20	0.20	0.48	7.70	1.94	2.26
-20 (- 4)	203	51	59	23	0.22	0.64	8.92	2.25	2.61
-15 (+ 5)	260	66	76	25	0.23	0.82	10.29	2.59	3.02
-10 (+14)	327	82	96	28	0.25	1.03	11.87	2.99	3.48
-5 (+23)	405	102	119	29	0.26	1.28	13.71	3.45	4.02
0 (+32)	495	125	145	31	0.27	1.57	15.85	3.99	4.65

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@220V1300RPM		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	64	16	19	15	0.17	0.20	4.41	1.11	1.29
-30	(-22)	96	24	28	18	0.19	0.30	5.38	1.36	1.58
-25	(-13)	134	34	39	21	0.21	0.42	6.34	1.60	1.86
-20	(- 4)	181	46	53	24	0.23	0.57	7.35	1.85	2.15
-15	(+ 5)	237	60	70	28	0.25	0.75	8.46	2.13	2.48
-10	(+14)	304	77	89	31	0.27	0.96	9.71	2.45	2.84
-5	(+23)	382	96	112	34	0.30	1.21	11.16	2.81	3.27
0	(+32)	473	119	139	37	0.33	1.50	12.86	3.24	3.77

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@220V1300RPM		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	52	13	15	15	0.18	0.16	3.43	0.86	1.00
-30	(-22)	79	20	23	18	0.19	0.25	4.34	1.09	1.27
-25	(-13)	114	29	33	22	0.21	0.36	5.19	1.31	1.52
-20	(- 4)	157	40	46	26	0.23	0.49	6.03	1.52	1.77
-15	(+ 5)	211	53	62	30	0.26	0.66	6.91	1.74	2.02
-10	(+14)	275	69	81	35	0.29	0.87	7.88	1.98	2.31
-5	(+23)	352	89	103	39	0.33	1.11	8.99	2.26	2.63
0	(+32)	442	111	129	43	0.38	1.40	10.29	2.59	3.01

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@220V2000RPM		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	129	33	38	21	0.21	0.40	6.13	1.54	1.80
-30	(-22)	182	46	53	26	0.24	0.57	6.88	1.73	2.02
-25	(-13)	243	61	71	31	0.27	0.76	7.82	1.97	2.29
-20	(- 4)	316	80	93	35	0.29	0.99	8.96	2.26	2.62
-15	(+ 5)	405	102	119	39	0.32	1.28	10.33	2.60	3.03
-10	(+14)	513	129	150	43	0.35	1.62	11.96	3.01	3.50
-5	(+23)	642	162	188	46	0.38	2.03	13.88	3.50	4.07
0	(+32)	797	201	234	50	0.42	2.53	16.11	4.06	4.72

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@220V2000RPM		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	104	26	30	22	0.21	0.32	4.83	1.22	1.41
-30	(-22)	156	39	46	27	0.25	0.49	5.67	1.43	1.66
-25	(-13)	217	55	64	33	0.28	0.68	6.58	1.66	1.93
-20	(- 4)	289	73	85	38	0.31	0.91	7.59	1.91	2.22
-15	(+ 5)	376	95	110	43	0.34	1.18	8.72	2.20	2.56
-10	(+14)	480	121	141	48	0.38	1.51	10.01	2.52	2.93
-5	(+23)	605	152	177	53	0.43	1.91	11.48	2.89	3.36
0	(+32)	755	190	221	58	0.48	2.39	13.15	3.31	3.85

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@220V2000RPM		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	85	21	25	22	0.22	0.27	3.80	0.96	1.11
-30	(-22)	137	34	40	28	0.26	0.43	4.76	1.20	1.39
-25	(-13)	195	49	57	34	0.29	0.61	5.69	1.43	1.67
-20	(- 4)	264	66	77	40	0.33	0.83	6.61	1.67	1.94
-15	(+ 5)	346	87	101	46	0.37	1.09	7.55	1.90	2.21
-10	(+14)	445	112	130	52	0.41	1.41	8.54	2.15	2.50
-5	(+23)	565	142	165	59	0.46	1.79	9.60	2.42	2.81
0	(+32)	707	178	207	66	0.52	2.24	10.75	2.71	3.15

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@220V3000RPM		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	193	49	57	35	0.28	0.61	5.56	1.40	1.63
-30	(-22)	268	68	79	42	0.34	0.84	6.46	1.63	1.89
-25	(-13)	364	92	107	49	0.39	1.14	7.51	1.89	2.20
-20	(- 4)	480	121	141	55	0.44	1.51	8.69	2.19	2.55
-15	(+ 5)	616	155	181	62	0.48	1.94	10.00	2.52	2.93
-10	(+14)	772	195	226	68	0.53	2.44	11.43	2.88	3.35
-5	(+23)	948	239	278	73	0.56	3.00	12.98	3.27	3.80
0	(+32)	1142	288	335	77	0.60	3.62	14.64	3.69	4.29

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@220V3000RPM		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	168	42	49	35	0.29	0.53	4.72	1.19	1.38
-30	(-22)	240	60	70	43	0.35	0.75	5.54	1.40	1.62
-25	(-13)	332	84	97	51	0.41	1.04	6.48	1.63	1.90
-20	(- 4)	445	112	131	59	0.47	1.40	7.51	1.89	2.20
-15	(+ 5)	579	146	170	67	0.52	1.82	8.64	2.18	2.53
-10	(+14)	732	184	214	74	0.58	2.31	9.86	2.49	2.89
-5	(+23)	904	228	265	81	0.63	2.86	11.16	2.81	3.27
0	(+32)	1095	276	321	87	0.69	3.47	12.54	3.16	3.67

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@220V3000RPM		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	137	35	40	37	0.30	0.43	3.81	0.96	1.12
-30	(-22)	206	52	60	45	0.36	0.64	4.61	1.16	1.35
-25	(-13)	295	74	86	54	0.42	0.93	5.49	1.38	1.61
-20	(- 4)	404	102	119	63	0.49	1.27	6.43	1.62	1.88
-15	(+ 5)	534	135	157	72	0.55	1.68	7.44	1.87	2.18
-10	(+14)	684	172	200	80	0.62	2.16	8.50	2.14	2.49
-5	(+23)	853	215	250	89	0.69	2.70	9.60	2.42	2.81
0	(+32)	1040	262	305	97	0.76	3.30	10.75	2.71	3.15

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@220V4000RPM		Static								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	226	57	66	44	0.36	0.71	5.18	1.30	1.52
-30	(-22)	332	84	97	54	0.43	1.04	6.15	1.55	1.80
-25	(-13)	463	117	136	65	0.51	1.45	7.15	1.80	2.10
-20	(- 4)	621	157	182	76	0.59	1.95	8.20	2.07	2.40
-15	(+ 5)	809	204	237	87	0.67	2.54	9.30	2.34	2.73
-10	(+14)	1028	259	301	98	0.76	3.24	10.49	2.64	3.07
-5	(+23)	1282	323	376	109	0.84	4.05	11.77	2.97	3.45
0	(+32)	1574	397	461	119	0.93	4.99	13.17	3.32	3.86

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4000RPM		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)	201	51	59	47	0.39	0.63	4.26	1.07	1.25
-30	(-22)	293	74	86	56	0.45	0.92	5.20	1.31	1.52
-25	(-13)	414	104	121	67	0.52	1.30	6.15	1.55	1.80
-20	(- 4)	564	142	165	79	0.60	1.77	7.13	1.80	2.09
-15	(+ 5)	748	189	219	91	0.69	2.36	8.17	2.06	2.39
-10	(+14)	968	244	284	104	0.79	3.05	9.27	2.34	2.72
-5	(+23)	1227	309	360	118	0.90	3.88	10.46	2.63	3.06
0	(+32)	1527	385	447	131	1.01	4.84	11.74	2.96	3.44

TEST CONDITIONS: @220V4000RPM		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)	172	43	50	49	0.42	0.54	3.45	0.87	1.01
-30	(-22)	245	62	72	58	0.47	0.77	4.33	1.09	1.27
-25	(-13)	350	88	103	68	0.53	1.10	5.22	1.32	1.53
-20	(- 4)	489	123	143	80	0.62	1.54	6.12	1.54	1.79
-15	(+ 5)	665	168	195	94	0.72	2.09	7.07	1.78	2.07
-10	(+14)	881	222	258	109	0.83	2.78	8.07	2.03	2.36
-5	(+23)	1139	287	334	124	0.96	3.60	9.13	2.30	2.68
0	(+32)	1442	363	422	141	1.10	4.57	10.29	2.59	3.02

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal FMX		
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		
3.1.2 Shape	Slanted 45° up + 45° to Back		
3.2 DISCHARGE	4.9 +0.10/-0.05	[mm]	(0.193" +0.004"/-0.002")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 0° up + 24° to Back		
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 45° up + 49° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		