

COMPRESSOR DEFINITION

Designation	FMX D6C
Nominal Voltage/Frequency	230 V 43 -134 Hz
Engineering Number	513908108

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 temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/9	[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)	5.12	[kg] (11.29 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	PFC CF02D02 M	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	PFC CF02D02 M	
6 Start winding resistance	13.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.00	[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	VDE	

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]	
140	35	41	23	0.22	0.44	6.19	1.56	1.81	

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]	
230	58	67	35	0.30	0.72	6.53	1.65	1.91	

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]	
349	88	102	54	0.42	1.10	6.46	1.63	1.89	

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]	
429	108	126	70	0.56	1.35	6.11	1.54	1.79	

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%			
	°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	85	21	25	14	0.19	0.27	6.03	1.52	1.77
-30	(-22)	120	30	35	17	0.20	0.37	7.18	1.81	2.10
-25	(-13)	159	40	47	19	0.21	0.50	8.26	2.08	2.42
-20	(- 4)	206	52	60	22	0.23	0.65	9.39	2.37	2.75
-15	(+ 5)	262	66	77	24	0.24	0.82	10.73	2.70	3.14
-10	(+14)	330	83	97	27	0.25	1.04	12.40	3.12	3.63
-5	(+23)	412	104	121	28	0.25	1.30	14.54	3.66	4.26
0	(+32)	511	129	150	29	0.24	1.62	17.30	4.36	5.07

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1300RPM		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)	72	18	21	15	0.20	0.22	4.94	1.24	1.45
-30	(-22)	105	27	31	17	0.21	0.33	6.11	1.54	1.79
-25	(-13)	143	36	42	20	0.22	0.45	7.08	1.78	2.08
-20	(- 4)	188	47	55	23	0.23	0.59	8.00	2.02	2.35
-15	(+ 5)	242	61	71	27	0.25	0.76	9.01	2.27	2.64
-10	(+14)	308	78	90	30	0.27	0.97	10.23	2.58	3.00
-5	(+23)	387	98	113	33	0.28	1.22	11.81	2.98	3.46
0	(+32)	482	122	141	35	0.29	1.53	13.89	3.50	4.07

TEST CONDITIONS: @220V1300RPM		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)	52	13	15	15	0.21	0.16	3.43	0.87	1.01
-30	(-22)	86	22	25	18	0.21	0.27	4.78	1.20	1.40
-25	(-13)	124	31	36	21	0.22	0.39	5.81	1.47	1.70
-20	(- 4)	169	42	49	25	0.24	0.53	6.68	1.68	1.96
-15	(+ 5)	222	56	65	30	0.26	0.70	7.51	1.89	2.20
-10	(+14)	287	72	84	34	0.29	0.90	8.45	2.13	2.48
-5	(+23)	365	92	107	38	0.31	1.15	9.63	2.43	2.82
0	(+32)	459	116	134	42	0.33	1.45	11.19	2.82	3.28

TEST CONDITIONS: @220V2000RPM		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%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	134	34	39	22	0.22	0.42	6.10	1.54	1.79
-30	(-22)	186	47	55	26	0.25	0.58	7.04	1.77	2.06
-25	(-13)	246	62	72	31	0.28	0.77	8.06	2.03	2.36
-20	(- 4)	316	80	93	34	0.30	0.99	9.21	2.32	2.70
-15	(+ 5)	401	101	118	38	0.31	1.26	10.57	2.66	3.10
-10	(+14)	504	127	148	41	0.33	1.59	12.19	3.07	3.57
-5	(+23)	629	159	184	44	0.35	1.99	14.12	3.56	4.14
0	(+32)	779	196	228	47	0.38	2.47	16.43	4.14	4.81

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2000RPM		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)	112	28	33	22	0.22	0.35	5.03	1.27	1.47
-30	(-22)	166	42	49	27	0.25	0.52	6.00	1.51	1.76
-25	(-13)	226	57	66	32	0.28	0.71	6.97	1.76	2.04
-20	(- 4)	298	75	87	37	0.30	0.94	7.99	2.01	2.34
-15	(+ 5)	383	96	112	42	0.33	1.21	9.12	2.30	2.67
-10	(+14)	486	122	142	46	0.36	1.53	10.43	2.63	3.06
-5	(+23)	610	154	179	51	0.39	1.93	11.97	3.02	3.51
0	(+32)	759	191	222	56	0.43	2.41	13.81	3.48	4.05

TEST CONDITIONS: @220V2000RPM		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)	97	24	28	22	0.23	0.30	4.30	1.08	1.26
-30	(-22)	148	37	43	28	0.26	0.47	5.28	1.33	1.55
-25	(-13)	206	52	60	33	0.29	0.65	6.18	1.56	1.81
-20	(- 4)	274	69	80	39	0.32	0.86	7.05	1.78	2.07
-15	(+ 5)	355	89	104	45	0.35	1.12	7.95	2.00	2.33
-10	(+14)	454	114	133	51	0.39	1.43	8.93	2.25	2.62
-5	(+23)	573	144	168	57	0.43	1.81	10.07	2.54	2.95
0	(+32)	717	181	210	63	0.49	2.27	11.41	2.88	3.34

TEST CONDITIONS: @220V3000RPM		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%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	188	47	55	34	0.28	0.59	5.59	1.41	1.64
-30	(-22)	263	66	77	40	0.32	0.82	6.52	1.64	1.91
-25	(-13)	351	88	103	47	0.36	1.10	7.49	1.89	2.20
-20	(- 4)	460	116	135	53	0.40	1.44	8.62	2.17	2.53
-15	(+ 5)	596	150	175	60	0.43	1.88	10.00	2.52	2.93
-10	(+14)	768	193	225	65	0.47	2.42	11.72	2.95	3.43
-5	(+23)	981	247	287	71	0.50	3.10	13.88	3.50	4.07
0	(+32)	1243	313	364	76	0.53	3.94	16.58	4.18	4.86

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3000RPM		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)	173	44	51	34	0.28	0.54	5.04	1.27	1.48
-30	(-22)	250	63	73	42	0.33	0.78	5.94	1.50	1.74
-25	(-13)	335	84	98	49	0.38	1.05	6.78	1.71	1.99
-20	(- 4)	436	110	128	57	0.44	1.37	7.66	1.93	2.25
-15	(+ 5)	561	141	164	65	0.49	1.77	8.68	2.19	2.54
-10	(+14)	716	180	210	72	0.54	2.26	9.93	2.50	2.91
-5	(+23)	908	229	266	79	0.59	2.87	11.51	2.90	3.37
0	(+32)	1145	289	336	86	0.63	3.63	13.51	3.40	3.96

TEST CONDITIONS: @220V3000RPM		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)	142	36	42	35	0.28	0.44	4.11	1.04	1.21
-30	(-22)	226	57	66	43	0.34	0.71	5.20	1.31	1.52
-25	(-13)	315	79	92	51	0.40	0.99	6.12	1.54	1.79
-20	(- 4)	416	105	122	60	0.46	1.31	6.96	1.75	2.04
-15	(+ 5)	535	135	157	69	0.53	1.68	7.82	1.97	2.29
-10	(+14)	680	171	199	77	0.59	2.15	8.80	2.22	2.58
-5	(+23)	858	216	251	86	0.65	2.71	10.00	2.52	2.93
0	(+32)	1076	271	315	94	0.71	3.41	11.50	2.90	3.37

TEST CONDITIONS: @220V4000RPM		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%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	235	59	69	43	0.32	0.74	5.49	1.38	1.61
-30	(-22)	328	83	96	52	0.39	1.03	6.30	1.59	1.85
-25	(-13)	454	114	133	62	0.47	1.42	7.27	1.83	2.13
-20	(- 4)	613	154	180	73	0.54	1.92	8.37	2.11	2.45
-15	(+ 5)	805	203	236	85	0.63	2.53	9.56	2.41	2.80
-10	(+14)	1031	260	302	96	0.73	3.25	10.82	2.73	3.17
-5	(+23)	1290	325	378	106	0.84	4.08	12.11	3.05	3.55
0	(+32)	1583	399	464	116	0.97	5.02	13.40	3.38	3.93

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)	227	57	67	47	0.36	0.71	4.84	1.22	1.42
-30	(-22)	306	77	90	55	0.43	0.96	5.55	1.40	1.63
-25	(-13)	419	106	123	65	0.50	1.31	6.42	1.62	1.88
-20	(- 4)	568	143	166	76	0.58	1.78	7.40	1.87	2.17
-15	(+ 5)	752	190	220	89	0.67	2.37	8.47	2.13	2.48
-10	(+14)	972	245	285	101	0.78	3.07	9.59	2.42	2.81
-5	(+23)	1228	309	360	115	0.90	3.88	10.73	2.70	3.14
0	(+32)	1520	383	445	127	1.04	4.82	11.87	2.99	3.48

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)	218	55	64	49	0.37	0.68	4.43	1.12	1.30
-30	(-22)	280	71	82	56	0.44	0.88	5.04	1.27	1.48
-25	(-13)	380	96	111	66	0.52	1.19	5.79	1.46	1.70
-20	(- 4)	517	130	152	78	0.61	1.63	6.64	1.67	1.95
-15	(+ 5)	692	174	203	91	0.71	2.18	7.56	1.91	2.22
-10	(+14)	905	228	265	106	0.82	2.86	8.53	2.15	2.50
-5	(+23)	1156	291	339	122	0.95	3.66	9.51	2.40	2.79
0	(+32)	1446	364	424	138	1.11	4.58	10.46	2.64	3.07

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard FMX		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.1.1 Material	Copper(OD)		
3.1.2 Shape	Slanted 45° up + 11° to Back		
3.2 DISCHARGE	5.1 +0.10/+0.00	[mm]	(0.201" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted 45° up + 37° to Back		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 45° up + 57° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		