

COMPRESSOR DEFINITION

Designation	FMX Y6C
Nominal Voltage/Frequency	230 V 43 -134 Hz
Engineering Number	513908161

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	1/10	[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)	4.9	[kg] (10.80 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	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	18.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.50	[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]	
133	34	39	24	0.22	0.42	5.45	1.37	1.60	

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	40	0.29	0.70	5.61	1.41	1.64	

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]	
331	83	97	59	0.42	1.04	5.60	1.41	1.64	

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	73	0.61	1.30	5.63	1.42	1.65	

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)	78	20	23	15	0.16	0.24	5.29	1.33	1.55
-30	(-22)	114	29	33	18	0.17	0.36	6.24	1.57	1.83
-25	(-13)	156	39	46	21	0.19	0.49	7.24	1.82	2.12
-20	(- 4)	205	52	60	25	0.21	0.64	8.35	2.10	2.45
-15	(+ 5)	263	66	77	28	0.24	0.83	9.63	2.43	2.82
-10	(+14)	331	83	97	30	0.26	1.04	11.16	2.81	3.27
-5	(+23)	410	103	120	31	0.28	1.30	12.97	3.27	3.80
0	(+32)	502	127	147	32	0.28	1.59	15.15	3.82	4.44

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)	68	17	20	16	0.17	0.21	4.41	1.11	1.29
-30	(-22)	99	25	29	19	0.18	0.31	5.24	1.32	1.53
-25	(-13)	136	34	40	22	0.20	0.43	6.05	1.52	1.77
-20	(- 4)	181	46	53	26	0.23	0.57	6.90	1.74	2.02
-15	(+ 5)	236	59	69	30	0.26	0.74	7.86	1.98	2.30
-10	(+14)	302	76	89	34	0.29	0.95	8.99	2.27	2.63
-5	(+23)	381	96	112	37	0.32	1.21	10.35	2.61	3.03
0	(+32)	474	119	139	40	0.34	1.50	12.01	3.03	3.52

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)	63	16	18	16	0.19	0.20	3.80	0.96	1.11
-30	(-22)	87	22	25	19	0.19	0.27	4.54	1.14	1.33
-25	(-13)	118	30	35	23	0.21	0.37	5.20	1.31	1.52
-20	(- 4)	159	40	46	27	0.24	0.50	5.83	1.47	1.71
-15	(+ 5)	210	53	62	32	0.28	0.66	6.51	1.64	1.91
-10	(+14)	274	69	80	37	0.32	0.86	7.28	1.84	2.13
-5	(+23)	351	88	103	43	0.36	1.11	8.23	2.07	2.41
0	(+32)	444	112	130	48	0.39	1.41	9.39	2.37	2.75

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)	131	33	38	21	0.20	0.41	6.10	1.54	1.79
-30	(-22)	183	46	54	27	0.22	0.57	6.71	1.69	1.97
-25	(-13)	244	61	71	33	0.26	0.77	7.51	1.89	2.20
-20	(- 4)	316	80	93	37	0.30	0.99	8.52	2.15	2.50
-15	(+ 5)	403	102	118	41	0.34	1.27	9.77	2.46	2.86
-10	(+14)	508	128	149	45	0.38	1.60	11.28	2.84	3.31
-5	(+23)	634	160	186	48	0.40	2.00	13.08	3.30	3.83
0	(+32)	784	198	230	52	0.41	2.48	15.19	3.83	4.45

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)	105	26	31	23	0.22	0.33	4.69	1.18	1.37
-30	(-22)	156	39	46	29	0.24	0.49	5.43	1.37	1.59
-25	(-13)	216	54	63	34	0.28	0.68	6.24	1.57	1.83
-20	(- 4)	287	72	84	40	0.33	0.90	7.17	1.81	2.10
-15	(+ 5)	373	94	109	45	0.38	1.17	8.22	2.07	2.41
-10	(+14)	476	120	139	50	0.43	1.50	9.43	2.38	2.76
-5	(+23)	600	151	176	56	0.47	1.90	10.82	2.73	3.17
0	(+32)	749	189	219	61	0.50	2.37	12.41	3.13	3.64

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)	87	22	25	23	0.23	0.27	3.82	0.96	1.12
-30	(-22)	136	34	40	29	0.25	0.43	4.67	1.18	1.37
-25	(-13)	193	49	57	35	0.29	0.61	5.49	1.38	1.61
-20	(- 4)	261	66	77	42	0.34	0.82	6.31	1.59	1.85
-15	(+ 5)	344	87	101	48	0.40	1.08	7.16	1.80	2.10
-10	(+14)	445	112	130	55	0.46	1.40	8.05	2.03	2.36
-5	(+23)	566	143	166	63	0.51	1.79	9.02	2.27	2.64
0	(+32)	711	179	208	71	0.55	2.25	10.08	2.54	2.95

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)	190	48	56	36	0.29	0.59	5.22	1.32	1.53
-30	(-22)	262	66	77	42	0.32	0.82	6.18	1.56	1.81
-25	(-13)	355	90	104	49	0.37	1.11	7.17	1.81	2.10
-20	(- 4)	471	119	138	57	0.44	1.48	8.25	2.08	2.42
-15	(+ 5)	610	154	179	64	0.50	1.92	9.49	2.39	2.78
-10	(+14)	772	194	226	71	0.55	2.43	10.95	2.76	3.21
-5	(+23)	957	241	280	75	0.58	3.03	12.68	3.20	3.72
0	(+32)	1166	294	342	78	0.56	3.70	14.77	3.72	4.33

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	38	0.31	0.54	4.55	1.15	1.33
-30	(-22)	242	61	71	44	0.33	0.76	5.52	1.39	1.62
-25	(-13)	333	84	98	52	0.39	1.04	6.43	1.62	1.89
-20	(- 4)	445	112	130	60	0.47	1.40	7.34	1.85	2.15
-15	(+ 5)	578	146	169	69	0.55	1.82	8.32	2.10	2.44
-10	(+14)	734	185	215	78	0.62	2.31	9.42	2.37	2.76
-5	(+23)	912	230	267	85	0.67	2.88	10.70	2.70	3.14
0	(+32)	1113	281	326	91	0.68	3.53	12.24	3.08	3.59

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)	132	33	39	39	0.33	0.41	3.39	0.85	0.99
-30	(-22)	201	51	59	45	0.35	0.63	4.53	1.14	1.33
-25	(-13)	290	73	85	53	0.40	0.91	5.53	1.39	1.62
-20	(- 4)	400	101	117	62	0.48	1.26	6.43	1.62	1.88
-15	(+ 5)	530	134	155	73	0.57	1.67	7.30	1.84	2.14
-10	(+14)	682	172	200	83	0.65	2.15	8.20	2.07	2.40
-5	(+23)	855	215	251	93	0.72	2.70	9.19	2.32	2.69
0	(+32)	1050	265	308	102	0.75	3.33	10.34	2.61	3.03

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)	216	54	63	47	0.35	0.68	4.61	1.16	1.35
-30	(-22)	316	80	93	56	0.44	0.99	5.61	1.41	1.65
-25	(-13)	433	109	127	67	0.53	1.36	6.50	1.64	1.90
-20	(- 4)	572	144	168	78	0.62	1.80	7.36	1.86	2.16
-15	(+ 5)	740	187	217	89	0.70	2.33	8.30	2.09	2.43
-10	(+14)	944	238	277	100	0.78	2.98	9.42	2.37	2.76
-5	(+23)	1191	300	349	110	0.85	3.76	10.80	2.72	3.16
0	(+32)	1486	375	436	119	0.92	4.71	12.55	3.16	3.68

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)	202	51	59	49	0.37	0.63	4.13	1.04	1.21
-30	(-22)	298	75	87	58	0.46	0.93	5.14	1.30	1.51
-25	(-13)	408	103	120	68	0.55	1.28	5.96	1.50	1.75
-20	(- 4)	540	136	158	81	0.64	1.70	6.69	1.69	1.96
-15	(+ 5)	701	177	205	94	0.73	2.21	7.43	1.87	2.18
-10	(+14)	896	226	262	108	0.83	2.83	8.26	2.08	2.42
-5	(+23)	1132	285	332	122	0.92	3.58	9.30	2.34	2.72
0	(+32)	1416	357	415	135	1.01	4.49	10.63	2.68	3.12

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)	175	44	51	52	0.39	0.55	3.39	0.85	0.99
-30	(-22)	264	67	77	58	0.48	0.83	4.51	1.14	1.32
-25	(-13)	367	92	108	68	0.57	1.15	5.38	1.36	1.58
-20	(- 4)	490	124	144	81	0.67	1.54	6.08	1.53	1.78
-15	(+ 5)	641	162	188	96	0.77	2.02	6.71	1.69	1.97
-10	(+14)	825	208	242	112	0.87	2.60	7.38	1.86	2.16
-5	(+23)	1049	264	307	128	0.98	3.32	8.17	2.06	2.39
0	(+32)	1320	333	387	145	1.09	4.18	9.19	2.32	2.69

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal FMX		
2 Tray holder	No		
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	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 + 37° 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 + 57° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		