COMPRESSOR DEFINITION

Designation	**FMX Y9C**
Nominal Voltage/Frequency	**230 V 43 -134 Hz**
Engineering Number	**513908041**

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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating (gauge)	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak (gauge)	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/7	[hp]
2 Displacement	8.74	[cm³] (0.533 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	22.000	
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/cm²] (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	CF02C05	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	INVERTER CF02C05	
6 Start winding resistance	20.00	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	20.00	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (43 /134 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (43 /134 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (43 /134 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **35ºC (+95ºF))**
@115V1300RPM **Static**

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)**	130	33	38	22	0.13	0.41	5.89	1.48	1.72
-30	**(-22)**	174	44	51	27	0.14	0.54	6.35	1.60	1.86
-25	**(-13)**	228	58	67	32	0.15	0.72	7.21	1.82	2.11
-20	**(- 4)**	295	74	86	35	0.17	0.93	8.38	2.11	2.46
-15	**(+ 5)**	375	94	110	38	0.19	1.18	9.80	2.47	2.87
-10	**(+14)**	470	119	138	41	0.21	1.48	11.40	2.87	3.34
-5	**(+23)**	583	147	171	44	0.22	1.84	13.10	3.30	3.84
0	**(+32)**	713	180	209	48	0.23	2.26	14.84	3.74	4.35

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **45ºC (+113ºF))**
@115V1300RPM **Static**

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)**	114	29	33	23	0.13	0.36	5.11	1.29	1.50
-30	**(-22)**	158	40	46	29	0.15	0.49	5.50	1.39	1.61
-25	**(-13)**	211	53	62	34	0.17	0.66	6.17	1.56	1.81
-20	**(- 4)**	276	69	81	39	0.19	0.87	7.06	1.78	2.07
-15	**(+ 5)**	353	89	104	44	0.21	1.11	8.08	2.04	2.37
-10	**(+14)**	446	112	131	49	0.23	1.41	9.16	2.31	2.69
-5	**(+23)**	554	140	162	54	0.25	1.75	10.25	2.58	3.00
0	**(+32)**	681	172	199	60	0.27	2.16	11.25	2.84	3.30

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **55ºC (+131ºF))**
@115V1300RPM **Static**

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	0.13	0.30	4.34	1.09	1.27
-30	**(-22)**	140	35	41	29	0.15	0.44	4.71	1.19	1.38
-25	**(-13)**	192	48	56	36	0.17	0.60	5.25	1.32	1.54
-20	**(- 4)**	254	64	75	43	0.20	0.80	5.89	1.48	1.73
-15	**(+ 5)**	330	83	97	51	0.23	1.04	6.56	1.65	1.92
-10	**(+14)**	419	105	123	59	0.26	1.32	7.18	1.81	2.11
-5	**(+23)**	523	132	153	68	0.29	1.65	7.70	1.94	2.26
0	**(+32)**	645	162	189	78	0.31	2.04	8.03	2.02	2.35

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **35ºC (+95ºF))**
@115V2000RPM **Static**

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)**	194	49	57	34	0.18	0.61	5.62	1.42	1.65
-30	**(-22)**	260	65	76	42	0.21	0.81	6.22	1.57	1.82
-25	**(-13)**	343	87	101	48	0.23	1.08	7.19	1.81	2.11
-20	**(- 4)**	447	113	131	53	0.25	1.40	8.39	2.11	2.46
-15	**(+ 5)**	571	144	167	59	0.28	1.80	9.72	2.45	2.85
-10	**(+14)**	717	181	210	65	0.31	2.26	11.05	2.79	3.24
-5	**(+23)**	887	224	260	72	0.34	2.80	12.27	3.09	3.60
0	**(+32)**	1082	273	317	82	0.37	3.43	13.25	3.34	3.88

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **45ºC (+113ºF))**
@115V2000RPM **Static**

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	35	0.18	0.55	5.00	1.26	1.47
-30	**(-22)**	239	60	70	44	0.21	0.75	5.47	1.38	1.60
-25	**(-13)**	321	81	94	51	0.24	1.01	6.27	1.58	1.84
-20	**(- 4)**	421	106	123	58	0.27	1.32	7.29	1.84	2.14
-15	**(+ 5)**	543	137	159	65	0.30	1.71	8.41	2.12	2.46
-10	**(+14)**	686	173	201	72	0.34	2.16	9.51	2.40	2.79
-5	**(+23)**	853	215	250	81	0.38	2.70	10.47	2.64	3.07
0	**(+32)**	1044	263	306	93	0.43	3.31	11.17	2.81	3.27

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **55ºC (+131ºF))**
@115V2000RPM **Static**

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)**	161	41	47	36	0.19	0.51	4.50	1.13	1.32
-30	**(-22)**	221	56	65	46	0.22	0.69	4.83	1.22	1.41
-25	**(-13)**	299	75	88	55	0.25	0.94	5.46	1.38	1.60
-20	**(- 4)**	396	100	116	63	0.29	1.24	6.30	1.59	1.84
-15	**(+ 5)**	512	129	150	72	0.33	1.61	7.20	1.81	2.11
-10	**(+14)**	651	164	191	81	0.37	2.05	8.06	2.03	2.36
-5	**(+23)**	812	205	238	93	0.42	2.57	8.75	2.21	2.56
0	**(+32)**	998	252	293	106	0.48	3.17	9.16	2.31	2.68

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **35ºC (+95ºF))**
@115V3000RPM **Static**

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)**	272	68	80	52	0.24	0.85	5.21	1.31	1.53
-30	**(-22)**	385	97	113	64	0.27	1.21	6.03	1.52	1.77
-25	**(-13)**	517	130	152	74	0.32	1.62	6.99	1.76	2.05
-20	**(- 4)**	673	170	197	84	0.38	2.11	8.04	2.03	2.36
-15	**(+ 5)**	856	216	251	94	0.43	2.69	9.13	2.30	2.68
-10	**(+14)**	1070	270	314	105	0.48	3.38	10.21	2.57	2.99
-5	**(+23)**	1319	332	387	117	0.51	4.17	11.24	2.83	3.29
0	**(+32)**	1607	405	471	132	0.52	5.09	12.17	3.07	3.57

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **45ºC (+113ºF))**
@115V3000RPM **Static**

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)**	242	61	71	53	0.24	0.76	4.60	1.16	1.35
-30	**(-22)**	352	89	103	65	0.28	1.10	5.35	1.35	1.57
-25	**(-13)**	481	121	141	77	0.33	1.51	6.23	1.57	1.83
-20	**(- 4)**	632	159	185	88	0.39	1.99	7.19	1.81	2.11
-15	**(+ 5)**	810	204	237	99	0.45	2.55	8.19	2.06	2.40
-10	**(+14)**	1017	256	298	111	0.51	3.21	9.16	2.31	2.68
-5	**(+23)**	1258	317	368	125	0.55	3.98	10.07	2.54	2.95
0	**(+32)**	1536	387	450	141	0.58	4.87	10.87	2.74	3.18

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **55ºC (+131ºF))**
@115V3000RPM **Static**

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)**	222	56	65	52	0.24	0.69	4.23	1.07	1.24
-30	**(-22)**	328	83	96	67	0.29	1.03	4.85	1.22	1.42
-25	**(-13)**	452	114	132	81	0.35	1.42	5.58	1.41	1.64
-20	**(- 4)**	596	150	175	93	0.41	1.87	6.39	1.61	1.87
-15	**(+ 5)**	765	193	224	107	0.49	2.41	7.21	1.82	2.11
-10	**(+14)**	963	243	282	121	0.55	3.04	8.01	2.02	2.35
-5	**(+23)**	1194	301	350	137	0.61	3.78	8.73	2.20	2.56
0	**(+32)**	1461	368	428	155	0.64	4.63	9.33	2.35	2.73

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **35ºC (+95ºF))**
@115V4000RPM **Static**

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)**	323	81	95	64	0.30	1.01	5.02	1.27	1.47
-30	**(-22)**	472	119	138	82	0.37	1.48	5.78	1.46	1.69
-25	**(-13)**	661	167	194	100	0.45	2.07	6.58	1.66	1.93
-20	**(- 4)**	881	222	258	119	0.53	2.77	7.43	1.87	2.18
-15	**(+ 5)**	1120	282	328	135	0.60	3.52	8.31	2.09	2.43
-10	**(+14)**	1367	345	401	149	0.65	4.31	9.23	2.33	2.70
-5	**(+23)**	1614	407	473	158	0.67	5.10	10.19	2.57	2.98
0	**(+32)**	1848	466	541	161	0.65	5.86	11.18	2.82	3.28

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **45ºC (+113ºF))**
@115V4000RPM **Static**

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)**	300	75	88	66	0.30	0.94	4.53	1.14	1.33
-30	**(-22)**	433	109	127	83	0.37	1.36	5.22	1.32	1.53
-25	**(-13)**	610	154	179	102	0.45	1.91	5.96	1.50	1.75
-20	**(- 4)**	822	207	241	121	0.54	2.58	6.74	1.70	1.98
-15	**(+ 5)**	1057	266	310	139	0.63	3.33	7.57	1.91	2.22
-10	**(+14)**	1305	329	382	155	0.69	4.11	8.45	2.13	2.48
-5	**(+23)**	1555	392	456	166	0.73	4.92	9.37	2.36	2.75
0	**(+32)**	1798	453	527	172	0.73	5.70	10.34	2.61	3.03

TEST CONDITIONS: **ASHRAE-IND** (Condensing temperature **55ºC (+131ºF))**
@115V4000RPM **Static**

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)**	273	69	80	68	0.31	0.85	4.05	1.02	1.19
-30	**(-22)**	388	98	114	85	0.38	1.22	4.66	1.17	1.36
-25	**(-13)**	552	139	162	104	0.46	1.73	5.32	1.34	1.56
-20	**(- 4)**	754	190	221	124	0.55	2.37	6.04	1.52	1.77
-15	**(+ 5)**	983	248	288	143	0.64	3.09	6.82	1.72	2.00
-10	**(+14)**	1229	310	360	161	0.72	3.88	7.65	1.93	2.24
-5	**(+23)**	1482	374	434	174	0.78	4.69	8.53	2.15	2.50
0	**(+32)**	1731	436	507	182	0.80	5.49	9.46	2.39	2.77

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard FMX		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 45° up + 45° 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 0° up + 24° to Back		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 45° up + 49° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		