COMPRESSOR DEFINITION

Designation	**FMX Y9C**
Nominal Voltage/Frequency	**230 V 43 -134 Hz**
Engineering Number	**513908312**

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	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	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 - ELECTRICAL 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	CF02D01 M 0.0 X	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	INVERTER CF02D01 M 0	
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	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ASHRAELBP32**		Evaporating temperature	**-23.3°C (-9.94°F)**		
@220V1300RPM			**Static**		(Condensing temperature	**54.4°C (129.92°F))**		
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
212	53	62	38	0.31	0.67	5.64	1.42	1.65

TEST CONDITIONS:			**ASHRAELBP32**		Evaporating temperature	**-23.3°C (-9.94°F)**		
@220V2000RPM			**Static**		(Condensing temperature	**54.4°C (129.92°F))**		
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
334	84	98	57	0.46	1.05	5.83	1.47	1.71

TEST CONDITIONS:			**ASHRAELBP32**		Evaporating temperature	**-23.3°C (-9.94°F)**		
@220V3000RPM			**Static**		(Condensing temperature	**54.4°C (129.92°F))**		
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
495	125	145	83	0.65	1.55	5.97	1.50	1.75

TEST CONDITIONS:			**ASHRAELBP32**		Evaporating temperature	**-23.3°C (-9.94°F)**		
@220V4000RPM			**Static**		(Condensing temperature	**54.4°C (129.92°F))**		
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
614	155	180	109	0.81	1.93	5.63	1.42	1.65

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ASHRAE32**			(Condensing temperature **35ºC (+95ºF))**					
@220V1300RPM		**Static**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	**(°F)**	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	132	33	39	22	0.22	0.41	5.97	1.50	1.75
-30	**(-22)**	177	45	52	27	0.25	0.56	6.46	1.63	1.89
-25	**(-13)**	233	59	68	32	0.27	0.73	7.35	1.85	2.15
-20	**(- 4)**	301	76	88	35	0.31	0.94	8.55	2.16	2.51
-15	**(+ 5)**	383	96	112	38	0.34	1.20	10.01	2.52	2.93
-10	**(+14)**	480	121	141	41	0.36	1.51	11.64	2.93	3.41
-5	**(+23)**	595	150	174	44	0.38	1.88	13.39	3.37	3.92
0	**(+32)**	730	184	214	48	0.38	2.31	15.17	3.82	4.44

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V1300RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	114	29	33	23	0.22	0.36	5.11	1.29	1.50
-30	**(-22)**	158	40	46	29	0.25	0.50	5.52	1.39	1.62
-25	**(-13)**	213	54	62	34	0.29	0.67	6.22	1.57	1.82
-20	**(- 4)**	279	70	82	39	0.33	0.88	7.13	1.80	2.09
-15	**(+ 5)**	359	90	105	44	0.37	1.13	8.19	2.06	2.40
-10	**(+14)**	454	114	133	49	0.40	1.43	9.32	2.35	2.73
-5	**(+23)**	566	143	166	54	0.43	1.79	10.46	2.64	3.06
0	**(+32)**	697	176	204	60	0.45	2.21	11.53	2.91	3.38

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V1300RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	98	25	29	22	0.22	0.31	4.40	1.11	1.29
-30	**(-22)**	141	36	41	29	0.26	0.44	4.76	1.20	1.39
-25	**(-13)**	194	49	57	36	0.31	0.61	5.30	1.34	1.55
-20	**(- 4)**	258	65	75	43	0.36	0.81	5.96	1.50	1.74
-15	**(+ 5)**	335	84	98	51	0.41	1.05	6.65	1.68	1.95
-10	**(+14)**	426	107	125	59	0.47	1.35	7.31	1.84	2.14
-5	**(+23)**	535	135	157	68	0.51	1.69	7.88	1.99	2.31
0	**(+32)**	661	167	194	78	0.55	2.10	8.27	2.08	2.42

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V2000RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	197	50	58	34	0.31	0.62	5.71	1.44	1.67
-30	**(-22)**	265	67	78	42	0.36	0.83	6.34	1.60	1.86
-25	**(-13)**	350	88	103	48	0.40	1.10	7.33	1.85	2.15
-20	**(- 4)**	456	115	134	53	0.44	1.43	8.57	2.16	2.51
-15	**(+ 5)**	584	147	171	59	0.48	1.84	9.94	2.51	2.91
-10	**(+14)**	736	185	216	65	0.53	2.32	11.33	2.86	3.32
-5	**(+23)**	913	230	267	72	0.59	2.89	12.63	3.18	3.70
0	**(+32)**	1118	282	328	82	0.67	3.54	13.71	3.45	4.02

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V2000RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	178	45	52	35	0.31	0.56	5.09	1.28	1.49
-30	**(-22)**	244	61	71	44	0.37	0.76	5.58	1.41	1.63
-25	**(-13)**	327	82	96	51	0.42	1.03	6.40	1.61	1.88
-20	**(- 4)**	430	108	126	58	0.47	1.35	7.45	1.88	2.18
-15	**(+ 5)**	555	140	163	65	0.52	1.75	8.60	2.17	2.52
-10	**(+14)**	703	177	206	72	0.58	2.22	9.75	2.46	2.86
-5	**(+23)**	877	221	257	81	0.66	2.77	10.76	2.71	3.15
0	**(+32)**	1078	272	316	93	0.75	3.41	11.54	2.91	3.38

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V2000RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	163	41	48	36	0.32	0.51	4.56	1.15	1.33
-30	**(-22)**	225	57	66	46	0.38	0.71	4.90	1.24	1.44
-25	**(-13)**	304	77	89	55	0.44	0.95	5.56	1.40	1.63
-20	**(- 4)**	403	102	118	63	0.50	1.27	6.42	1.62	1.88
-15	**(+ 5)**	523	132	153	72	0.57	1.65	7.35	1.85	2.15
-10	**(+14)**	666	168	195	81	0.64	2.10	8.25	2.08	2.42
-5	**(+23)**	835	210	245	93	0.73	2.64	8.99	2.27	2.63
0	**(+32)**	1030	260	302	106	0.84	3.27	9.47	2.39	2.77

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V3000RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	277	70	81	52	0.43	0.87	5.31	1.34	1.55
-30	**(-22)**	397	100	116	64	0.49	1.25	6.22	1.57	1.82
-25	**(-13)**	535	135	157	74	0.56	1.68	7.24	1.82	2.12
-20	**(- 4)**	696	175	204	84	0.65	2.19	8.32	2.10	2.44
-15	**(+ 5)**	885	223	259	94	0.74	2.78	9.45	2.38	2.77
-10	**(+14)**	1107	279	324	105	0.82	3.49	10.57	2.66	3.10
-5	**(+23)**	1368	345	401	117	0.88	4.33	11.65	2.94	3.41
0	**(+32)**	1674	422	490	132	0.91	5.31	12.67	3.19	3.71

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V3000RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	245	62	72	53	0.42	0.77	4.66	1.17	1.37
-30	**(-22)**	361	91	106	65	0.49	1.13	5.47	1.38	1.60
-25	**(-13)**	494	124	145	77	0.58	1.55	6.39	1.61	1.87
-20	**(- 4)**	649	164	190	88	0.68	2.04	7.39	1.86	2.16
-15	**(+ 5)**	832	210	244	99	0.79	2.62	8.42	2.12	2.47
-10	**(+14)**	1049	264	307	111	0.88	3.31	9.45	2.38	2.77
-5	**(+23)**	1304	329	382	125	0.96	4.12	10.45	2.63	3.06
0	**(+32)**	1604	404	470	141	1.02	5.09	11.38	2.87	3.33

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V3000RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	223	56	65	52	0.42	0.70	4.27	1.08	1.25
-30	**(-22)**	332	84	97	67	0.50	1.04	4.91	1.24	1.44
-25	**(-13)**	458	115	134	81	0.61	1.44	5.66	1.43	1.66
-20	**(- 4)**	606	153	178	93	0.72	1.91	6.49	1.63	1.90
-15	**(+ 5)**	782	197	229	107	0.84	2.46	7.35	1.85	2.15
-10	**(+14)**	991	250	290	121	0.96	3.13	8.23	2.07	2.41
-5	**(+23)**	1239	312	363	137	1.06	3.92	9.07	2.28	2.66
0	**(+32)**	1530	386	448	155	1.13	4.85	9.84	2.48	2.88

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V4000RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	330	83	97	64	0.50	1.03	5.13	1.29	1.50
-30	**(-22)**	481	121	141	82	0.64	1.51	5.90	1.49	1.73
-25	**(-13)**	676	170	198	100	0.78	2.12	6.73	1.70	1.97
-20	**(- 4)**	905	228	265	119	0.93	2.84	7.63	1.92	2.24
-15	**(+ 5)**	1156	291	339	135	1.05	3.64	8.58	2.16	2.51
-10	**(+14)**	1420	358	416	149	1.14	4.48	9.59	2.42	2.81
-5	**(+23)**	1687	425	494	158	1.18	5.33	10.65	2.68	3.12
0	**(+32)**	1945	490	570	161	1.16	6.17	11.77	2.97	3.45

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V4000RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	301	76	88	66	0.51	0.94	4.58	1.15	1.34
-30	**(-22)**	438	110	128	83	0.64	1.37	5.30	1.33	1.55
-25	**(-13)**	622	157	182	102	0.79	1.95	6.08	1.53	1.78
-20	**(- 4)**	843	212	247	121	0.94	2.65	6.91	1.74	2.03
-15	**(+ 5)**	1090	275	319	139	1.08	3.43	7.81	1.97	2.29
-10	**(+14)**	1353	341	396	155	1.20	4.27	8.76	2.21	2.57
-5	**(+23)**	1621	409	475	166	1.28	5.13	9.77	2.46	2.86
0	**(+32)**	1885	475	552	172	1.31	5.98	10.83	2.73	3.17

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V4000RPM **Static**

Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	277	70	81	68	0.54	0.87	4.10	1.03	1.20
-30	**(-22)**	397	100	116	85	0.66	1.24	4.75	1.20	1.39
-25	**(-13)**	567	143	166	104	0.80	1.78	5.47	1.38	1.60
-20	**(- 4)**	777	196	228	124	0.96	2.44	6.24	1.57	1.83
-15	**(+ 5)**	1017	256	298	143	1.12	3.20	7.06	1.78	2.07
-10	**(+14)**	1276	322	374	161	1.26	4.03	7.95	2.00	2.33
-5	**(+23)**	1544	389	452	174	1.37	4.88	8.89	2.24	2.60
0	**(+32)**	1811	456	531	182	1.44	5.74	9.88	2.49	2.89

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard FMX		
2 Tray holder	Yes		
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 28° up + 25° to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
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		