COMPRESSOR DEFINITION

Designation	**FMX Y11C**
Nominal Voltage/Frequency	**230 V 43-150 Hz**
Engineering Number	**513908316**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	230 / 43-150	[V / Hz]	
4 Application type	Low-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°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)	Static	-	-
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		[hp]
2 Displacement	10.85	[cm³] (0.662 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	24.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	5	[kg] (11.02 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	230V 43-150 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		[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance		[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (43/160 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (43/160 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (43/160 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ASHRAEHBP32**			Evaporating temperature		**7.2°C (44.96°F)**
@220V2000RPM			**Static**			(Condensing temperature		**54.4°C (129.92°F))**
Cooling capacity (Qe)			Input power (We)	Electric current	Mass flow rate	Efficiency EER & COP		
+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
447	113	131	75	0.60		5.96	1.50	1.75

TEST CONDITIONS:			**ASHRAEHBP32**			Evaporating temperature		**7.2°C (44.96°F)**
@220V3000RPM			**Static**			(Condensing temperature		**54.4°C (129.92°F))**
Cooling capacity (Qe)			Input power (We)	Electric current	Mass flow rate	Efficiency EER & COP		
+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
652	164	191	111	0.88		5.87	1.48	1.72

TEST CONDITIONS:			**ASHRAELBP32**			Evaporating temperature		**-23.3°C (-9.94°F)**
@220V1300RPM			**Static**			(Condensing temperature		**54.4°C (129.92°F))**
Cooling capacity (Qe)			Input power (We)	Electric current	Mass flow rate	Efficiency EER & COP		
+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
297	75	87	52	0.43	0.93	5.71	1.44	1.67

TEST CONDITIONS:			**ASHRAELBP32**			Evaporating temperature		**-23.3°C (-9.94°F)**
@220V4000RPM			**Static**			(Condensing temperature		**54.4°C (129.92°F))**
Cooling capacity (Qe)			Input power (We)	Electric current	Mass flow rate	Efficiency EER & COP		
+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
822	207	241	146	1.16	2.58	5.63	1.42	1.65

TEST CONDITIONS:			**ASHRAELBP32**			Evaporating temperature		**-23.3°C (-9.94°F)**
@220V4500RPM			**Static**			(Condensing temperature		**54.4°C (129.92°F))**
Cooling capacity (Qe)			Input power (We)	Electric current	Mass flow rate	Efficiency EER & COP		
+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
863	217	253	162	1.29	2.71	5.33	1.34	1.56

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)**	168	42	49	30	0.23	0.53	5.54	1.40	1.62
-30	**(-22)**	221	56	65	36	0.27	0.69	6.20	1.56	1.82
-25	**(-13)**	287	72	84	41	0.31	0.90	6.95	1.75	2.04
-20	**(- 4)**	368	93	108	47	0.35	1.16	7.81	1.97	2.29
-15	**(+ 5)**	465	117	136	53	0.39	1.46	8.82	2.22	2.58
-10	**(+14)**	581	146	170	58	0.43	1.83	9.97	2.51	2.92
-5	**(+23)**	717	181	210	63	0.47	2.27	11.31	2.85	3.31

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)**	154	39	45	31	0.24	0.48	4.93	1.24	1.45
-30	**(-22)**	206	52	61	38	0.28	0.65	5.46	1.38	1.60
-25	**(-13)**	272	68	80	45	0.33	0.85	6.05	1.52	1.77
-20	**(- 4)**	352	89	103	52	0.39	1.10	6.71	1.69	1.96
-15	**(+ 5)**	449	113	131	60	0.45	1.41	7.46	1.88	2.19
-10	**(+14)**	565	142	166	68	0.52	1.78	8.33	2.10	2.44
-5	**(+23)**	702	177	206	75	0.58	2.22	9.33	2.35	2.73

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)**	140	35	41	32	0.25	0.44	4.39	1.11	1.29
-30	**(-22)**	191	48	56	40	0.29	0.60	4.84	1.22	1.42
-25	**(-13)**	256	65	75	49	0.36	0.80	5.30	1.33	1.55
-20	**(- 4)**	336	85	99	58	0.43	1.06	5.79	1.46	1.70
-15	**(+ 5)**	434	109	127	68	0.52	1.37	6.34	1.60	1.86
-10	**(+14)**	552	139	162	79	0.61	1.74	6.97	1.76	2.04
-5	**(+23)**	691	174	202	90	0.71	2.18	7.69	1.94	2.25

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V1600RPM **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)**	216	55	63	35	0.27	0.68	6.13	1.54	1.80
-30	**(-22)**	292	74	86	42	0.31	0.92	6.98	1.76	2.05
-25	**(-13)**	377	95	110	48	0.36	1.18	7.76	1.96	2.27
-20	**(- 4)**	475	120	139	56	0.41	1.49	8.52	2.15	2.50
-15	**(+ 5)**	589	148	172	63	0.46	1.85	9.34	2.35	2.74
-10	**(+14)**	722	182	211	70	0.51	2.28	10.27	2.59	3.01
-5	**(+23)**	877	221	257	77	0.56	2.77	11.38	2.87	3.34

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V1600RPM **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)**	192	48	56	38	0.28	0.60	5.02	1.27	1.47
-30	**(-22)**	263	66	77	45	0.33	0.82	5.81	1.46	1.70
-25	**(-13)**	345	87	101	53	0.39	1.08	6.49	1.63	1.90
-20	**(- 4)**	441	111	129	62	0.46	1.39	7.11	1.79	2.08
-15	**(+ 5)**	555	140	163	71	0.54	1.75	7.76	1.95	2.27
-10	**(+14)**	689	174	202	81	0.62	2.17	8.49	2.14	2.49
-5	**(+23)**	847	213	248	91	0.70	2.68	9.37	2.36	2.74

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V1600RPM **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)**	175	44	51	39	0.29	0.55	4.49	1.13	1.32
-30	**(-22)**	245	62	72	46	0.34	0.77	5.26	1.33	1.54
-25	**(-13)**	327	82	96	56	0.41	1.03	5.89	1.48	1.73
-20	**(- 4)**	425	107	124	66	0.49	1.34	6.44	1.62	1.89
-15	**(+ 5)**	542	137	159	78	0.58	1.71	6.97	1.76	2.04
-10	**(+14)**	681	172	199	90	0.68	2.15	7.55	1.90	2.21
-5	**(+23)**	845	213	248	102	0.79	2.67	8.24	2.08	2.42

E - PERFORMANCE - CURVES

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)**	250	63	73	45	0.34	0.78	5.50	1.39	1.61
-30	**(-22)**	338	85	99	54	0.40	1.06	6.23	1.57	1.82
-25	**(-13)**	442	111	130	63	0.46	1.39	7.04	1.77	2.06
-20	**(- 4)**	567	143	166	72	0.53	1.78	7.93	2.00	2.32
-15	**(+ 5)**	718	181	210	81	0.60	2.26	8.90	2.24	2.61
-10	**(+14)**	898	226	263	90	0.69	2.83	9.96	2.51	2.92
-5	**(+23)**	1114	281	326	100	0.78	3.52	11.11	2.80	3.25

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)**	240	60	70	48	0.35	0.75	5.02	1.26	1.47
-30	**(-22)**	324	82	95	58	0.42	1.02	5.59	1.41	1.64
-25	**(-13)**	424	107	124	68	0.50	1.33	6.22	1.57	1.82
-20	**(- 4)**	544	137	159	79	0.58	1.71	6.92	1.74	2.03
-15	**(+ 5)**	690	174	202	90	0.68	2.17	7.67	1.93	2.25
-10	**(+14)**	865	218	253	102	0.79	2.73	8.49	2.14	2.49
-5	**(+23)**	1075	271	315	115	0.90	3.40	9.37	2.36	2.75

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)**	223	56	65	48	0.36	0.70	4.61	1.16	1.35
-30	**(-22)**	305	77	89	60	0.44	0.96	5.08	1.28	1.49
-25	**(-13)**	403	101	118	72	0.53	1.26	5.60	1.41	1.64
-20	**(- 4)**	520	131	152	85	0.64	1.63	6.15	1.55	1.80
-15	**(+ 5)**	662	167	194	98	0.76	2.08	6.75	1.70	1.98
-10	**(+14)**	833	210	244	113	0.89	2.63	7.38	1.86	2.16
-5	**(+23)**	1038	262	304	129	1.03	3.28	8.06	2.03	2.36

E - PERFORMANCE - CURVES

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)**	380	96	111	69	0.51	1.19	5.52	1.39	1.62
-30	**(-22)**	504	127	148	80	0.60	1.58	6.28	1.58	1.84
-25	**(-13)**	659	166	193	94	0.72	2.07	6.99	1.76	2.05
-20	**(- 4)**	847	213	248	111	0.85	2.66	7.66	1.93	2.25
-15	**(+ 5)**	1069	269	313	128	1.01	3.36	8.34	2.10	2.44
-10	**(+14)**	1327	334	389	147	1.17	4.19	9.05	2.28	2.65
-5	**(+23)**	1623	409	476	165	1.34	5.13	9.82	2.47	2.88

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)**	352	89	103	71	0.52	1.10	4.93	1.24	1.44
-30	**(-22)**	474	119	139	85	0.64	1.48	5.61	1.41	1.64
-25	**(-13)**	626	158	184	101	0.77	1.97	6.23	1.57	1.82
-20	**(- 4)**	811	204	238	119	0.93	2.55	6.82	1.72	2.00
-15	**(+ 5)**	1030	260	302	139	1.10	3.24	7.42	1.87	2.18
-10	**(+14)**	1284	324	376	159	1.28	4.05	8.06	2.03	2.36
-5	**(+23)**	1576	397	462	180	1.46	4.98	8.76	2.21	2.57

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)**	318	80	93	71	0.53	1.00	4.45	1.12	1.30
-30	**(-22)**	436	110	128	87	0.66	1.37	5.03	1.27	1.48
-25	**(-13)**	585	147	171	105	0.82	1.84	5.57	1.40	1.63
-20	**(- 4)**	765	193	224	126	1.00	2.41	6.09	1.53	1.78
-15	**(+ 5)**	979	247	287	148	1.18	3.08	6.62	1.67	1.94
-10	**(+14)**	1228	309	360	171	1.38	3.87	7.18	1.81	2.10
-5	**(+23)**	1513	381	443	194	1.58	4.79	7.81	1.97	2.29

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V4500RPM **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)**	523	132	153	104	0.76	1.64	5.03	1.27	1.47
-30	**(-22)**	652	164	191	117	0.91	2.04	5.61	1.41	1.65
-25	**(-13)**	871	219	255	142	1.15	2.73	6.15	1.55	1.80
-20	**(- 4)**	1147	289	336	172	1.42	3.60	6.67	1.68	1.96
-15	**(+ 5)**	1451	366	425	201	1.68	4.57	7.24	1.83	2.12
-10	**(+14)**	1752	441	513	223	1.87	5.52	7.91	1.99	2.32
-5	**(+23)**	2018	509	591	231	1.94	6.38	8.71	2.20	2.55

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V4500RPM **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)**	454	114	133	99	0.78	1.42	4.61	1.16	1.35
-30	**(-22)**	607	153	178	119	0.96	1.90	5.16	1.30	1.51
-25	**(-13)**	837	211	245	148	1.22	2.63	5.66	1.43	1.66
-20	**(- 4)**	1113	281	326	180	1.50	3.50	6.16	1.55	1.81
-15	**(+ 5)**	1405	354	412	209	1.75	4.42	6.71	1.69	1.97
-10	**(+14)**	1682	424	493	229	1.91	5.30	7.37	1.86	2.16
-5	**(+23)**	1912	482	560	234	1.95	6.05	8.17	2.06	2.39

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V4500RPM **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)**	411	104	120	97	0.77	1.29	4.24	1.07	1.24
-30	**(-22)**	568	143	167	121	0.98	1.78	4.75	1.20	1.39
-25	**(-13)**	791	199	232	152	1.25	2.48	5.21	1.31	1.53
-20	**(- 4)**	1048	264	307	184	1.53	3.29	5.68	1.43	1.66
-15	**(+ 5)**	1309	330	383	211	1.76	4.12	6.21	1.56	1.82
-10	**(+14)**	1542	389	452	227	1.89	4.86	6.84	1.72	2.00
-5	**(+23)**	1718	433	503	225	1.88	5.43	7.63	1.92	2.23

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 42º up + 45° 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 10° up + 10° 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 63° up + 49° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		