COMPRESSOR DEFINITION

Designation	**FMX D9C**
Nominal Voltage/Frequency	**230 V 43 -134 Hz**
Engineering Number	**513908251**

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	1/6	[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	-	[kgf/cm²]

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	CF02C04 L XX XX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CF02C04 L XX	
6 Start winding resistance	13.00	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	13.00	[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		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@115V1300RPM**			**ASHRAELBP32 Static**		Evaporating temperature (Condensing temperature		**-23.3°C (-9.94°F) 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	34	0.48	0.67	6.29	1.59	1.84

TEST CONDITIONS: **@115V2000RPM**			**ASHRAELBP32 Static**		Evaporating temperature (Condensing temperature		**-23.3°C (-9.94°F) 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]
339	85	99	52	0.68	1.06	6.49	1.64	1.90

TEST CONDITIONS: **@115V3000RPM**			**ASHRAELBP32 Static**		Evaporating temperature (Condensing temperature		**-23.3°C (-9.94°F) 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]
520	131	152	81	1.14	1.63	6.45	1.63	1.89

TEST CONDITIONS: **@115V4000RPM**			**ASHRAELBP32 Static**		Evaporating temperature (Condensing temperature		**-23.3°C (-9.94°F) 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]
637	161	187	104	1.45	2.00	6.12	1.54	1.79

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@115V1300RPM**		**ASHRAE32 Static**			(Condensing temperature **35ºC (+95ºF))**					
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)**	127	32	37	20	0.34	0.40	6.23	1.57	1.83
-30	**(-22)**	173	43	51	24	0.37	0.54	7.12	1.79	2.09
-25	**(-13)**	229	58	67	28	0.41	0.72	8.12	2.05	2.38
-20	**(- 4)**	298	75	87	32	0.45	0.94	9.30	2.34	2.72
-15	**(+ 5)**	383	96	112	36	0.49	1.20	10.67	2.69	3.13
-10	**(+14)**	484	122	142	40	0.53	1.53	12.30	3.10	3.60
-5	**(+23)**	605	152	177	43	0.56	1.91	14.22	3.58	4.17
0	**(+32)**	747	188	219	45	0.58	2.37	16.48	4.15	4.83

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@115V1300RPM **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)**	118	30	35	21	0.36	0.37	5.55	1.40	1.63
-30	**(-22)**	160	40	47	25	0.39	0.50	6.31	1.59	1.85
-25	**(-13)**	213	54	62	30	0.43	0.67	7.11	1.79	2.08
-20	**(- 4)**	280	70	82	35	0.48	0.88	8.01	2.02	2.35
-15	**(+ 5)**	362	91	106	40	0.53	1.14	9.04	2.28	2.65
-10	**(+14)**	463	117	136	45	0.58	1.46	10.25	2.58	3.00
-5	**(+23)**	583	147	171	50	0.63	1.84	11.67	2.94	3.42
0	**(+32)**	725	183	212	54	0.67	2.30	13.36	3.37	3.91

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V1300RPM **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)**	97	24	28	22	0.36	0.30	4.50	1.13	1.32
-30	**(-22)**	137	35	40	26	0.40	0.43	5.27	1.33	1.54
-25	**(-13)**	190	48	56	32	0.46	0.60	6.01	1.51	1.76
-20	**(- 4)**	257	65	75	38	0.53	0.81	6.77	1.71	1.98
-15	**(+ 5)**	341	86	100	45	0.60	1.07	7.59	1.91	2.22
-10	**(+14)**	443	112	130	52	0.67	1.40	8.51	2.14	2.49
-5	**(+23)**	565	142	166	59	0.75	1.79	9.58	2.41	2.81
0	**(+32)**	710	179	208	66	0.82	2.25	10.84	2.73	3.18

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@115V2000RPM **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)**	202	51	59	33	0.44	0.63	6.18	1.56	1.81
-30	**(-22)**	267	67	78	38	0.51	0.84	7.05	1.78	2.07
-25	**(-13)**	352	89	103	44	0.56	1.10	8.07	2.03	2.36
-20	**(- 4)**	457	115	134	50	0.62	1.44	9.23	2.33	2.70
-15	**(+ 5)**	584	147	171	55	0.68	1.84	10.53	2.65	3.09
-10	**(+14)**	732	185	215	61	0.74	2.31	11.98	3.02	3.51
-5	**(+23)**	903	228	265	67	0.83	2.86	13.57	3.42	3.98
0	**(+32)**	1097	276	321	71	0.95	3.48	15.31	3.86	4.49

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@115V2000RPM **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)**	187	47	55	34	0.46	0.59	5.57	1.40	1.63
-30	**(-22)**	251	63	74	40	0.54	0.79	6.30	1.59	1.85
-25	**(-13)**	334	84	98	47	0.61	1.05	7.13	1.80	2.09
-20	**(- 4)**	438	110	128	54	0.68	1.38	8.06	2.03	2.36
-15	**(+ 5)**	562	142	165	62	0.75	1.77	9.09	2.29	2.66
-10	**(+14)**	709	179	208	69	0.84	2.24	10.24	2.58	3.00
-5	**(+23)**	877	221	257	76	0.95	2.77	11.48	2.89	3.37
0	**(+32)**	1068	269	313	83	1.08	3.39	12.84	3.24	3.76

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V2000RPM **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)**	160	40	47	34	0.46	0.50	4.73	1.19	1.38
-30	**(-22)**	223	56	65	41	0.56	0.70	5.42	1.37	1.59
-25	**(-13)**	304	77	89	49	0.65	0.96	6.17	1.56	1.81
-20	**(- 4)**	406	102	119	58	0.74	1.28	6.99	1.76	2.05
-15	**(+ 5)**	529	133	155	67	0.83	1.66	7.87	1.98	2.31
-10	**(+14)**	672	169	197	76	0.94	2.12	8.83	2.22	2.59
-5	**(+23)**	838	211	246	85	1.07	2.65	9.85	2.48	2.89
0	**(+32)**	1027	259	301	94	1.23	3.25	10.94	2.76	3.21

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@115V3000RPM **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)**	287	72	84	50	0.61	0.90	5.72	1.44	1.68
-30	**(-22)**	399	101	117	60	0.76	1.25	6.69	1.69	1.96
-25	**(-13)**	532	134	156	69	0.88	1.67	7.67	1.93	2.25
-20	**(- 4)**	690	174	202	79	0.99	2.17	8.70	2.19	2.55
-15	**(+ 5)**	878	221	257	90	1.11	2.76	9.81	2.47	2.87
-10	**(+14)**	1101	277	323	100	1.26	3.47	11.02	2.78	3.23
-5	**(+23)**	1364	344	400	110	1.48	4.31	12.38	3.12	3.63
0	**(+32)**	1672	421	490	120	1.78	5.30	13.92	3.51	4.08

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@115V3000RPM **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)**	257	65	75	51	0.63	0.81	5.02	1.26	1.47
-30	**(-22)**	368	93	108	62	0.84	1.15	5.90	1.49	1.73
-25	**(-13)**	499	126	146	73	0.99	1.57	6.79	1.71	1.99
-20	**(- 4)**	654	165	192	85	1.11	2.06	7.71	1.94	2.26
-15	**(+ 5)**	839	211	246	96	1.24	2.64	8.69	2.19	2.55
-10	**(+14)**	1058	267	310	108	1.38	3.34	9.77	2.46	2.86
-5	**(+23)**	1317	332	386	120	1.56	4.16	10.98	2.77	3.22
0	**(+32)**	1620	408	475	132	1.82	5.14	12.35	3.11	3.62

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V3000RPM **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)**	241	61	71	52	0.65	0.76	4.65	1.17	1.36
-30	**(-22)**	346	87	101	64	0.91	1.08	5.41	1.36	1.59
-25	**(-13)**	469	118	137	76	1.11	1.47	6.16	1.55	1.80
-20	**(- 4)**	616	155	181	89	1.26	1.94	6.92	1.74	2.03
-15	**(+ 5)**	792	200	232	103	1.39	2.49	7.73	1.95	2.27
-10	**(+14)**	1002	253	294	116	1.53	3.16	8.63	2.17	2.53
-5	**(+23)**	1251	315	367	130	1.70	3.96	9.64	2.43	2.82
0	**(+32)**	1544	389	452	143	1.92	4.90	10.80	2.72	3.16

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@115V4000RPM **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)**	358	90	105	64	0.77	1.12	5.60	1.41	1.64
-30	**(-22)**	509	128	149	77	0.98	1.59	6.59	1.66	1.93
-25	**(-13)**	695	175	204	93	1.21	2.18	7.48	1.88	2.19
-20	**(- 4)**	917	231	269	111	1.45	2.88	8.30	2.09	2.43
-15	**(+ 5)**	1173	296	344	129	1.70	3.69	9.11	2.30	2.67
-10	**(+14)**	1463	369	429	148	1.97	4.61	9.96	2.51	2.92
-5	**(+23)**	1787	450	524	164	2.26	5.65	10.88	2.74	3.19
0	**(+32)**	2145	540	628	177	2.57	6.80	11.92	3.00	3.49

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@115V4000RPM **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)**	315	79	92	65	0.77	0.99	4.91	1.24	1.44
-30	**(-22)**	453	114	133	78	1.03	1.42	5.79	1.46	1.70
-25	**(-13)**	632	159	185	95	1.29	1.98	6.59	1.66	1.93
-20	**(- 4)**	851	214	249	115	1.55	2.67	7.36	1.85	2.16
-15	**(+ 5)**	1109	280	325	136	1.83	3.49	8.14	2.05	2.39
-10	**(+14)**	1408	355	412	157	2.11	4.44	8.99	2.26	2.63
-5	**(+23)**	1745	440	511	176	2.41	5.52	9.93	2.50	2.91
0	**(+32)**	2121	534	621	193	2.72	6.72	11.03	2.78	3.23

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V4000RPM **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)**	303	76	89	65	0.83	0.95	4.63	1.17	1.36
-30	**(-22)**	414	104	121	79	1.11	1.30	5.30	1.34	1.55
-25	**(-13)**	571	144	167	97	1.39	1.79	5.92	1.49	1.74
-20	**(- 4)**	773	195	227	118	1.67	2.43	6.54	1.65	1.92
-15	**(+ 5)**	1021	257	299	141	1.96	3.21	7.21	1.82	2.11
-10	**(+14)**	1313	331	385	164	2.24	4.14	7.96	2.01	2.33
-5	**(+23)**	1649	416	483	187	2.53	5.22	8.84	2.23	2.59
0	**(+32)**	2029	511	595	207	2.83	6.43	9.90	2.50	2.90

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard FMX		
2 Tray holder	Yes		
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 + 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 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 45° up + 57° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		