COMPRESSOR DEFINITION

Designation	**FMR 7-11C**
Nominal Voltage/Frequency	**230 V 90-315 Hz**
Engineering Number	**518000056**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	230 / 90-315	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Hot Gas Defrost not allowed)		
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	1/9	[hp]
2 Displacement	6.51	[cm³] (0.397 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	18.800	
3 Lubricant charge	140	[ml] (4.73 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	3.58	[kg] (7.89 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 90-315 Hz 3~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	CF01F01 N	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CF01F01 N 00 XX	
6 Start winding resistance	15.35	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	15.35	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (90/315 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (90/315 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (90/315 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - TUV - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@115V1800RPM**			**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]
232	58	68	43	0.86	0.73	5.37	1.35	1.57

TEST CONDITIONS: **@115V2800RPM**			**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]
362	91	106	65	1.24	1.14	5.55	1.40	1.63

TEST CONDITIONS: **@115V6300RPM**			**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]
734	185	215	147	2.59	2.30	4.99	1.26	1.46

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@115V1800RPM**		**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)**	132	33	39	27	0.55	0.41	4.91	1.24	1.44
-30	**(-22)**	181	46	53	31	0.64	0.57	5.75	1.45	1.69
-25	**(-13)**	238	60	70	36	0.72	0.75	6.65	1.68	1.95
-20	**(- 4)**	305	77	89	40	0.78	0.96	7.64	1.92	2.24
-15	**(+ 5)**	386	97	113	44	0.85	1.22	8.74	2.20	2.56
-10	**(+14)**	484	122	142	48	0.91	1.53	10.00	2.52	2.93
-5	**(+23)**	601	152	176	53	0.99	1.90	11.44	2.88	3.35
0	**(+32)**	741	187	217	57	1.07	2.35	13.10	3.30	3.84

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@115V1800RPM **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)**	121	30	35	28	0.55	0.38	4.40	1.11	1.29
-30	**(-22)**	170	43	50	33	0.67	0.53	5.09	1.28	1.49
-25	**(-13)**	226	57	66	39	0.78	0.71	5.82	1.47	1.70
-20	**(- 4)**	294	74	86	45	0.87	0.92	6.59	1.66	1.93
-15	**(+ 5)**	375	95	110	50	0.95	1.18	7.46	1.88	2.19
-10	**(+14)**	473	119	139	56	1.04	1.49	8.45	2.13	2.47
-5	**(+23)**	590	149	173	62	1.12	1.86	9.59	2.42	2.81
0	**(+32)**	728	184	213	67	1.22	2.31	10.92	2.75	3.20

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V1800RPM **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)**	109	27	32	28	0.56	0.34	3.89	0.98	1.14
-30	**(-22)**	157	40	46	35	0.71	0.49	4.51	1.14	1.32
-25	**(-13)**	213	54	63	42	0.84	0.67	5.12	1.29	1.50
-20	**(- 4)**	280	71	82	49	0.95	0.88	5.76	1.45	1.69
-15	**(+ 5)**	360	91	106	56	1.06	1.13	6.46	1.63	1.89
-10	**(+14)**	457	115	134	63	1.16	1.44	7.25	1.83	2.12
-5	**(+23)**	572	144	168	70	1.26	1.81	8.16	2.06	2.39
0	**(+32)**	709	179	208	77	1.37	2.25	9.23	2.33	2.71

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@115V2200RPM **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)**	161	40	47	33	0.65	0.50	4.94	1.24	1.45
-30	**(-22)**	220	56	65	38	0.76	0.69	5.77	1.46	1.69
-25	**(-13)**	290	73	85	44	0.85	0.91	6.67	1.68	1.95
-20	**(- 4)**	373	94	109	49	0.93	1.17	7.65	1.93	2.24
-15	**(+ 5)**	473	119	139	54	1.01	1.49	8.75	2.21	2.56
-10	**(+14)**	591	149	173	59	1.08	1.87	10.00	2.52	2.93
-5	**(+23)**	732	185	215	64	1.17	2.32	11.44	2.88	3.35
0	**(+32)**	899	226	263	69	1.26	2.85	13.10	3.30	3.84

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@115V2200RPM **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)**	147	37	43	33	0.66	0.46	4.46	1.12	1.31
-30	**(-22)**	207	52	61	40	0.79	0.65	5.18	1.30	1.52
-25	**(-13)**	277	70	81	47	0.92	0.87	5.91	1.49	1.73
-20	**(- 4)**	360	91	105	54	1.02	1.13	6.70	1.69	1.96
-15	**(+ 5)**	458	115	134	60	1.12	1.44	7.57	1.91	2.22
-10	**(+14)**	575	145	169	67	1.22	1.81	8.55	2.16	2.51
-5	**(+23)**	714	180	209	74	1.32	2.26	9.69	2.44	2.84
0	**(+32)**	878	221	257	81	1.42	2.78	11.01	2.78	3.23

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V2200RPM **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)**	130	33	38	33	0.66	0.41	3.91	0.99	1.15
-30	**(-22)**	189	48	56	41	0.83	0.59	4.57	1.15	1.34
-25	**(-13)**	258	65	76	50	0.98	0.81	5.22	1.31	1.53
-20	**(- 4)**	338	85	99	58	1.11	1.06	5.88	1.48	1.72
-15	**(+ 5)**	434	109	127	66	1.23	1.37	6.59	1.66	1.93
-10	**(+14)**	549	138	161	74	1.34	1.73	7.38	1.86	2.16
-5	**(+23)**	685	173	201	83	1.46	2.17	8.28	2.09	2.43
0	**(+32)**	845	213	248	91	1.57	2.68	9.33	2.35	2.73

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@115V2800RPM **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)**	201	51	59	41	0.80	0.63	4.88	1.23	1.43
-30	**(-22)**	277	70	81	48	0.93	0.87	5.72	1.44	1.68
-25	**(-13)**	366	92	107	55	1.04	1.15	6.61	1.66	1.94
-20	**(- 4)**	472	119	138	62	1.15	1.48	7.57	1.91	2.22
-15	**(+ 5)**	599	151	175	69	1.25	1.88	8.64	2.18	2.53
-10	**(+14)**	750	189	220	76	1.35	2.37	9.86	2.49	2.89
-5	**(+23)**	931	234	273	83	1.46	2.94	11.27	2.84	3.30
0	**(+32)**	1143	288	335	89	1.56	3.62	12.90	3.25	3.78

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@115V2800RPM **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)**	185	47	54	41	0.80	0.58	4.48	1.13	1.31
-30	**(-22)**	261	66	77	50	0.96	0.82	5.22	1.31	1.53
-25	**(-13)**	350	88	103	59	1.11	1.10	5.96	1.50	1.75
-20	**(- 4)**	456	115	134	68	1.25	1.43	6.74	1.70	1.97
-15	**(+ 5)**	582	147	171	76	1.38	1.83	7.59	1.91	2.23
-10	**(+14)**	732	185	215	85	1.51	2.31	8.57	2.16	2.51
-5	**(+23)**	911	229	267	94	1.63	2.88	9.69	2.44	2.84
0	**(+32)**	1121	282	328	103	1.75	3.55	10.99	2.77	3.22

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V2800RPM **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	41	0.79	0.51	3.91	0.99	1.15
-30	**(-22)**	238	60	70	51	0.99	0.74	4.61	1.16	1.35
-25	**(-13)**	325	82	95	62	1.17	1.02	5.28	1.33	1.55
-20	**(- 4)**	428	108	125	72	1.34	1.34	5.96	1.50	1.75
-15	**(+ 5)**	551	139	161	83	1.49	1.73	6.67	1.68	1.96
-10	**(+14)**	698	176	204	93	1.64	2.20	7.47	1.88	2.19
-5	**(+23)**	872	220	255	104	1.78	2.76	8.38	2.11	2.46
0	**(+32)**	1077	271	316	115	1.91	3.42	9.44	2.38	2.77

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)**	275	69	81	59	1.09	0.86	4.69	1.18	1.38
-30	**(-22)**	383	96	112	69	1.27	1.20	5.51	1.39	1.62
-25	**(-13)**	508	128	149	80	1.44	1.59	6.35	1.60	1.86
-20	**(- 4)**	659	166	193	91	1.60	2.07	7.25	1.83	2.12
-15	**(+ 5)**	838	211	246	102	1.75	2.64	8.24	2.08	2.42
-10	**(+14)**	1053	265	309	112	1.91	3.32	9.37	2.36	2.75
-5	**(+23)**	1309	330	383	123	2.06	4.14	10.68	2.69	3.13
0	**(+32)**	1609	406	472	132	2.21	5.10	12.20	3.08	3.58

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)**	251	63	74	58	1.08	0.79	4.32	1.09	1.27
-30	**(-22)**	357	90	105	70	1.30	1.12	5.06	1.28	1.48
-25	**(-13)**	481	121	141	83	1.51	1.51	5.78	1.46	1.70
-20	**(- 4)**	630	159	185	96	1.70	1.98	6.53	1.65	1.91
-15	**(+ 5)**	808	204	237	110	1.89	2.54	7.34	1.85	2.15
-10	**(+14)**	1020	257	299	123	2.07	3.22	8.26	2.08	2.42
-5	**(+23)**	1273	321	373	137	2.26	4.03	9.31	2.35	2.73
0	**(+32)**	1571	396	460	150	2.44	4.98	10.55	2.66	3.09

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)**	227	57	66	59	1.09	0.71	3.85	0.97	1.13
-30	**(-22)**	330	83	97	72	1.34	1.04	4.58	1.16	1.34
-25	**(-13)**	452	114	133	86	1.57	1.42	5.27	1.33	1.54
-20	**(- 4)**	598	151	175	101	1.79	1.88	5.94	1.50	1.74
-15	**(+ 5)**	773	195	226	116	2.00	2.43	6.64	1.67	1.95
-10	**(+14)**	982	248	288	132	2.21	3.10	7.41	1.87	2.17
-5	**(+23)**	1231	310	361	149	2.42	3.90	8.29	2.09	2.43
0	**(+32)**	1526	385	447	165	2.62	4.84	9.31	2.35	2.73

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@115V6300RPM **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)**	400	101	117	98	1.72	1.25	4.08	1.03	1.19
-30	**(-22)**	567	143	166	123	2.10	1.78	4.62	1.16	1.35
-25	**(-13)**	740	186	217	138	2.33	2.32	5.35	1.35	1.57
-20	**(- 4)**	920	232	270	147	2.43	2.89	6.28	1.58	1.84
-15	**(+ 5)**	1113	280	326	150	2.45	3.50	7.41	1.87	2.17
-10	**(+14)**	1321	333	387	150	2.44	4.17	8.75	2.21	2.56
-5	**(+23)**	1546	390	453	150	2.44	4.89	10.32	2.60	3.02
0	**(+32)**	1794	452	526	151	2.49	5.68	12.11	3.05	3.55

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@115V6300RPM **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)**	371	94	109	94	1.66	1.16	3.93	0.99	1.15
-30	**(-22)**	542	137	159	120	2.07	1.70	4.50	1.13	1.32
-25	**(-13)**	708	178	208	137	2.31	2.22	5.18	1.31	1.52
-20	**(- 4)**	872	220	256	146	2.43	2.74	5.99	1.51	1.75
-15	**(+ 5)**	1038	261	304	150	2.46	3.27	6.93	1.75	2.03
-10	**(+14)**	1208	304	354	151	2.45	3.81	8.00	2.02	2.35
-5	**(+23)**	1386	349	406	150	2.44	4.38	9.23	2.33	2.70
0	**(+32)**	1575	397	462	151	2.47	4.99	10.61	2.67	3.11

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V6300RPM **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)**	339	85	99	94	1.65	1.06	3.63	0.91	1.06
-30	**(-22)**	514	130	151	120	2.08	1.61	4.25	1.07	1.25
-25	**(-13)**	674	170	198	137	2.33	2.12	4.92	1.24	1.44
-20	**(- 4)**	822	207	241	146	2.46	2.58	5.64	1.42	1.65
-15	**(+ 5)**	961	242	282	150	2.49	3.03	6.41	1.62	1.88
-10	**(+14)**	1095	276	321	151	2.47	3.45	7.25	1.83	2.13
-5	**(+23)**	1226	309	359	150	2.45	3.88	8.17	2.06	2.39
0	**(+32)**	1358	342	398	150	2.46	4.31	9.17	2.31	2.69

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard ES/FMS		
2 Tray holder	No		
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 75° up		
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 75° up		
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 75° up		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		