

COMPRESSOR DEFINITION

Designation	FMS Y11C
Nominal Voltage/Frequency	230 V 90-315 Hz
Engineering Number	518000035

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 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/6	[hp]
2 Displacement	7.87	[cm ³] (0.480 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	19.800	
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/cm ²]

C - ELETRICAL 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	CF02F01L	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CF02F01 L 00 XX F	
6 Start winding resistance	15.35	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.35	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (90/315 Hz)	2.17	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (90/315 Hz)	1.25	[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 - NOM - TUV - UKCA - UL - VDE	

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 +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
282	71	83	50	0.96	0.89	5.70	1.44	1.67

TEST CONDITIONS: @115V2800RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
423	107	124	72	1.34	1.33	5.87	1.48	1.72

TEST CONDITIONS: @115V4000RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
614	155	180	105	1.89	1.93	5.83	1.47	1.71

TEST CONDITIONS: @115V5000RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
750	189	220	133	2.34	2.35	5.63	1.42	1.65

TEST CONDITIONS: @115V6300RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
900	227	264	170	2.90	2.83	5.28	1.33	1.55

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V1800RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
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]
-35	(-31)	169	43	49	30	0.48	0.53	5.69	1.43	1.67
-30	(-22)	223	56	65	35	0.59	0.70	6.35	1.60	1.86
-25	(-13)	292	74	86	41	0.67	0.92	7.13	1.80	2.09
-20	(- 4)	377	95	110	47	0.74	1.18	8.06	2.03	2.36
-15	(+ 5)	480	121	141	53	0.80	1.51	9.17	2.31	2.69
-10	(+14)	603	152	177	58	0.88	1.90	10.49	2.64	3.07
-5	(+23)	747	188	219	62	1.00	2.36	12.03	3.03	3.53
0	(+32)	915	231	268	65	1.17	2.90	13.83	3.49	4.05

TEST CONDITIONS: @115V1800RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
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]
-35	(-31)	158	40	46	31	0.48	0.50	5.18	1.31	1.52
-30	(-22)	211	53	62	37	0.65	0.66	5.71	1.44	1.67
-25	(-13)	278	70	81	44	0.77	0.87	6.31	1.59	1.85
-20	(- 4)	361	91	106	51	0.86	1.13	7.00	1.76	2.05
-15	(+ 5)	463	117	136	59	0.95	1.46	7.81	1.97	2.29
-10	(+14)	586	148	172	67	1.04	1.85	8.78	2.21	2.57
-5	(+23)	730	184	214	74	1.15	2.31	9.91	2.50	2.90
0	(+32)	898	226	263	80	1.31	2.85	11.25	2.84	3.30

TEST CONDITIONS: @115V1800RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
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]
-35	(-31)	139	35	41	31	0.51	0.43	4.52	1.14	1.33
-30	(-22)	189	48	56	38	0.73	0.59	5.01	1.26	1.47
-25	(-13)	255	64	75	47	0.90	0.80	5.50	1.39	1.61
-20	(- 4)	338	85	99	56	1.03	1.06	6.04	1.52	1.77
-15	(+ 5)	440	111	129	66	1.13	1.38	6.64	1.67	1.94
-10	(+14)	562	142	165	77	1.23	1.77	7.33	1.85	2.15
-5	(+23)	707	178	207	87	1.35	2.24	8.14	2.05	2.39
0	(+32)	876	221	257	97	1.49	2.78	9.10	2.29	2.67

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V2800RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
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]
-35	(-31)	252	64	74	44	0.71	0.79	5.70	1.44	1.67
-30	(-22)	338	85	99	53	0.88	1.06	6.39	1.61	1.87
-25	(-13)	446	112	131	62	1.00	1.40	7.20	1.81	2.11
-20	(- 4)	578	146	169	71	1.11	1.82	8.14	2.05	2.39
-15	(+ 5)	736	185	216	80	1.22	2.32	9.21	2.32	2.70
-10	(+14)	921	232	270	89	1.35	2.90	10.40	2.62	3.05
-5	(+23)	1133	286	332	97	1.53	3.58	11.70	2.95	3.43
0	(+32)	1375	346	403	104	1.77	4.36	13.10	3.30	3.84

TEST CONDITIONS: @115V2800RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
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]
-35	(-31)	239	60	70	46	0.71	0.75	5.18	1.31	1.52
-30	(-22)	317	80	93	55	0.94	0.99	5.73	1.44	1.68
-25	(-13)	420	106	123	66	1.11	1.32	6.40	1.61	1.87
-20	(- 4)	549	138	161	76	1.25	1.72	7.17	1.81	2.10
-15	(+ 5)	704	177	206	87	1.38	2.22	8.04	2.03	2.36
-10	(+14)	888	224	260	99	1.52	2.80	9.00	2.27	2.64
-5	(+23)	1101	277	323	109	1.69	3.48	10.06	2.54	2.95
0	(+32)	1345	339	394	120	1.91	4.26	11.21	2.82	3.28

TEST CONDITIONS: @115V2800RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
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]
-35	(-31)	213	54	62	46	0.76	0.67	4.64	1.17	1.36
-30	(-22)	285	72	84	56	1.04	0.89	5.10	1.29	1.49
-25	(-13)	383	96	112	68	1.26	1.20	5.64	1.42	1.65
-20	(- 4)	508	128	149	81	1.43	1.60	6.27	1.58	1.84
-15	(+ 5)	661	167	194	95	1.58	2.08	6.98	1.76	2.05
-10	(+14)	844	213	247	109	1.73	2.66	7.76	1.96	2.27
-5	(+23)	1057	266	310	123	1.89	3.34	8.61	2.17	2.52
0	(+32)	1303	328	382	137	2.09	4.13	9.52	2.40	2.79

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V4000RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
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]
-35	(-31)	350	88	103	65	1.03	1.10	5.39	1.36	1.58
-30	(-22)	477	120	140	76	1.24	1.49	6.21	1.56	1.82
-25	(-13)	628	158	184	90	1.43	1.97	6.96	1.75	2.04
-20	(- 4)	809	204	237	105	1.61	2.54	7.73	1.95	2.26
-15	(+ 5)	1025	258	300	119	1.80	3.23	8.60	2.17	2.52
-10	(+14)	1280	323	375	133	2.00	4.04	9.65	2.43	2.83
-5	(+23)	1581	398	463	144	2.22	5.00	10.99	2.77	3.22
0	(+32)	1932	487	566	151	2.48	6.12	12.69	3.20	3.72

TEST CONDITIONS: @115V4000RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
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]
-35	(-31)	311	78	91	64	0.98	0.97	4.86	1.23	1.42
-30	(-22)	441	111	129	79	1.31	1.38	5.57	1.40	1.63
-25	(-13)	594	150	174	95	1.58	1.86	6.23	1.57	1.82
-20	(- 4)	776	196	227	112	1.80	2.44	6.91	1.74	2.02
-15	(+ 5)	992	250	291	129	1.99	3.12	7.70	1.94	2.26
-10	(+14)	1248	314	366	143	2.16	3.94	8.70	2.19	2.55
-5	(+23)	1548	390	454	155	2.31	4.89	9.99	2.52	2.93
0	(+32)	1898	478	556	163	2.46	6.02	11.65	2.94	3.41

TEST CONDITIONS: @115V4000RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
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]
-35	(-31)	278	70	81	63	1.02	0.87	4.40	1.11	1.29
-30	(-22)	405	102	119	81	1.45	1.27	5.02	1.27	1.47
-25	(-13)	555	140	163	99	1.78	1.74	5.60	1.41	1.64
-20	(- 4)	733	185	215	118	2.03	2.30	6.21	1.57	1.82
-15	(+ 5)	945	238	277	136	2.21	2.98	6.96	1.75	2.04
-10	(+14)	1196	301	350	151	2.33	3.77	7.91	1.99	2.32
-5	(+23)	1490	375	437	163	2.39	4.71	9.17	2.31	2.69
0	(+32)	1834	462	537	170	2.42	5.81	10.81	2.72	3.17

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V6300RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
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)	522	132	153	107	1.68	1.63	4.88	1.23	1.43	
-30 (-22)	690	174	202	127	2.17	2.16	5.48	1.38	1.61	
-25 (-13)	925	233	271	150	2.30	2.90	6.18	1.56	1.81	
-20 (- 4)	1204	303	353	173	2.29	3.78	6.95	1.75	2.04	
-15 (+ 5)	1505	379	441	194	2.37	4.74	7.76	1.96	2.27	
-10 (+14)	1805	455	529	211	2.74	5.69	8.59	2.17	2.52	
-5 (+23)	2082	525	610	221	3.64	6.58	9.41	2.37	2.76	
0 (+32)	2314	583	678	223	5.28	7.34	10.20	2.57	2.99	

TEST CONDITIONS: @115V6300RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
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)	488	123	143	106	1.61	1.53	4.59	1.16	1.34	
-30 (-22)	651	164	191	130	2.25	2.04	5.08	1.28	1.49	
-25 (-13)	877	221	257	155	2.47	2.75	5.68	1.43	1.66	
-20 (- 4)	1145	288	335	180	2.50	3.60	6.36	1.60	1.86	
-15 (+ 5)	1431	361	419	201	2.56	4.51	7.11	1.79	2.08	
-10 (+14)	1715	432	502	218	2.87	5.41	7.90	1.99	2.32	
-5 (+23)	1973	497	578	227	3.64	6.24	8.70	2.19	2.55	
0 (+32)	2183	550	640	226	5.10	6.92	9.48	2.39	2.78	

TEST CONDITIONS: @115V6300RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
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)	444	112	130	110	1.73	1.39	4.05	1.02	1.19	
-30 (-22)	598	151	175	136	2.50	1.88	4.47	1.13	1.31	
-25 (-13)	814	205	239	162	2.80	2.56	5.03	1.27	1.47	
-20 (- 4)	1068	269	313	187	2.85	3.36	5.68	1.43	1.67	
-15 (+ 5)	1339	337	392	208	2.87	4.22	6.43	1.62	1.88	
-10 (+14)	1604	404	470	223	3.09	5.06	7.22	1.82	2.12	
-5 (+23)	1840	464	539	229	3.72	5.82	8.05	2.03	2.36	
0 (+32)	2026	511	594	224	4.98	6.43	8.88	2.24	2.60	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal ES/FMS		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted parallel to Base Plate		
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 parallel BP+45°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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		