

COMPRESSOR DEFINITION

Designation	FMS Y7C
Nominal Voltage/Frequency	230 V 90-315 Hz
Engineering Number	518000057

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	1/9	[hp]
2 Displacement	5.19	[cm ³] (0.317 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	15.000	
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 - 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 L	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CF01F01 L 00 XX	
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)	-	[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]
178	45	52	31	0.60	0.56	5.76	1.45	1.69

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]
273	69	80	46	0.88	0.86	5.95	1.50	1.74

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]
372	94	109	63	1.22	1.17	5.88	1.48	1.72

TEST CONDITIONS: @115V5000RPM			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]
465	117	136	80	1.51	1.46	5.81	1.46	1.70

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]
580	146	170	103	1.96	1.82	5.62	1.42	1.65

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V6300RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
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]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	330	83	97	69	1.28	1.03	4.75	1.20	1.39
-30	(-22)	447	113	131	79	1.43	1.40	5.69	1.43	1.67
-25	(-13)	609	153	178	91	1.65	1.91	6.67	1.68	1.95
-20	(- 4)	796	201	233	105	1.89	2.50	7.58	1.91	2.22
-15	(+ 5)	990	250	290	120	2.12	3.12	8.29	2.09	2.43
-10	(+14)	1174	296	344	136	2.28	3.70	8.70	2.19	2.55
-5	(+23)	1327	334	389	153	2.33	4.20	8.68	2.19	2.54
0	(+32)	1433	361	420	171	2.23	4.55	8.11	2.04	2.38

TEST CONDITIONS: @115V6300RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
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]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	289	73	85	67	1.26	0.90	4.33	1.09	1.27
-30	(-22)	405	102	119	81	1.46	1.27	5.04	1.27	1.48
-25	(-13)	568	143	166	96	1.72	1.78	5.90	1.49	1.73
-20	(- 4)	758	191	222	111	1.99	2.38	6.77	1.71	1.99
-15	(+ 5)	957	241	280	127	2.22	3.01	7.55	1.90	2.21
-10	(+14)	1147	289	336	142	2.36	3.62	8.12	2.05	2.38
-5	(+23)	1309	330	384	157	2.38	4.14	8.34	2.10	2.45
0	(+32)	1425	359	418	170	2.23	4.52	8.12	2.05	2.38

TEST CONDITIONS: @115V6300RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
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]	[Btu/Wh]	[kcal/Wh]
-35	(-31)	267	67	78	64	1.25	0.83	4.13	1.04	1.21
-30	(-22)	371	94	109	82	1.50	1.16	4.60	1.16	1.35
-25	(-13)	523	132	153	99	1.78	1.64	5.31	1.34	1.56
-20	(- 4)	705	178	207	115	2.05	2.22	6.12	1.54	1.79
-15	(+ 5)	898	226	263	129	2.26	2.83	6.94	1.75	2.03
-10	(+14)	1082	273	317	143	2.38	3.42	7.63	1.92	2.24
-5	(+23)	1242	313	364	154	2.34	3.93	8.08	2.04	2.37
0	(+32)	1356	342	397	162	2.12	4.30	8.17	2.06	2.39

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal 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 45° up + 0° 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 parallel to Base Plate		
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 + 0° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		