

COMPRESSOR DEFINITION

Designation	F FU80AK
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	513200563

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	Blend		
3 Nominal voltage and frequency	115-127 / 60	[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	RSIR-CSIR		
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)	Static/Fan	-	98 to 140 V
8.2 LBP (43°C Ambient temperature)	Static/Fan	-	98 to 140 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.5	[kgf/cm ²] (206 psig)	/ °C - °F
9.2 Peak	18.2	[kgf/cm ²] (259 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4+	[hp]
2 Displacement	6.76	[cm ³] (0.413 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	17.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO32	
4 Weight (with oil charge)	11.42	[kg] (25.18 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516094/213516132	
3 Start capacitor	243-292(110)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM762PFBZZ-53	
6 Start winding resistance	8.28	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	28.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	3.23	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CE - TUV - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			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]
910	229	267	184	2.39	6.66	4.95	1.25	1.45

TEST CONDITIONS: @115V60Hz			ASHRAELBP32 Fan		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]
910	229	267	184	2.39	6.66	4.95	1.25	1.45

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		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)	538	136	158	131	2.08	3.92	4.11	1.04	1.20
-30	(-22)	702	177	206	149	2.17	5.13	4.72	1.19	1.38
-25	(-13)	898	226	263	167	2.28	6.57	5.37	1.35	1.57
-20	(- 4)	1131	285	331	186	2.40	8.29	6.09	1.53	1.78
-15	(+ 5)	1405	354	412	205	2.53	10.33	6.87	1.73	2.01
-10	(+14)	1726	435	506	223	2.66	12.73	7.73	1.95	2.27
-5	(+23)	2099	529	615	242	2.78	15.53	8.68	2.19	2.54

TEST CONDITIONS: @115V60Hz		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)	481	121	141	131	2.10	3.51	3.68	0.93	1.08
-30	(-22)	639	161	187	152	2.20	4.67	4.20	1.06	1.23
-25	(-13)	831	209	243	175	2.33	6.08	4.75	1.20	1.39
-20	(- 4)	1061	267	311	198	2.48	7.78	5.35	1.35	1.57
-15	(+ 5)	1334	336	391	221	2.65	9.81	6.01	1.51	1.76
-10	(+14)	1655	417	485	246	2.82	12.21	6.73	1.70	1.97
-5	(+23)	2030	512	595	270	3.00	15.02	7.52	1.90	2.20

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°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)	435	110	127	129	2.08	3.17	3.36	0.85	0.98
-30	(-22)	582	147	171	153	2.20	4.25	3.82	0.96	1.12
-25	(-13)	765	193	224	178	2.35	5.59	4.30	1.08	1.26
-20	(- 4)	987	249	289	205	2.53	7.24	4.82	1.21	1.41
-15	(+ 5)	1255	316	368	233	2.73	9.23	5.38	1.36	1.58
-10	(+14)	1572	396	461	262	2.95	11.60	5.98	1.51	1.75
-5	(+23)	1945	490	570	292	3.18	14.39	6.65	1.68	1.95

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
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 plated steel		
3.1.2 Shape	Slanted		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper plated steel		
3.2.2 Shape	Slanted		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper plated steel		
3.3.2 Shape	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		