

COMPRESSOR DEFINITION

Designation	F FU130LAS
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	513200989

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	HFO		
3 Nominal voltage and frequency	220-240 / 50	[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	CSIR		
6 Starting torque	LST/HST - Low/High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Fan	187 to 255 V	-
8.2 LBP (43°C Ambient temperature)	Fan	187 to 255 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	15.72	[kgf/cm ²] (224 psig)	/ °C - °F
9.2 Peak (gauge)	19.82	[kgf/cm ²] (282 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3+	[hp]
2 Displacement	10.61	[cm ³] (0.647 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	11.25	[kg] (24.80 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516345	
3 Start capacitor	88-108(250)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM757KFBYY-53	
6 Start winding resistance	16.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	17.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	2.50	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			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]
1170	295	343	237	1.86	8.10	4.94	1.24	1.45

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(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)	700	176	205	155	1.68	0.00	4.50	1.13	1.32
-30	(-22)	930	234	272	180	1.73	0.00	5.16	1.30	1.51
-25	(-13)	1215	306	356	205	1.78	0.00	5.94	1.50	1.74
-20	(- 4)	1558	393	457	229	1.84	0.00	6.81	1.72	1.99
-15	(+ 5)	1962	494	575	253	1.90	0.00	7.76	1.95	2.27
-10	(+14)	2428	612	712	277	1.97	0.00	8.76	2.21	2.57
-5	(+23)	2960	746	867	301	2.05	0.00	9.81	2.47	2.88

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(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)	642	162	188	162	1.69	0.00	3.96	1.00	1.16
-30	(-22)	867	219	254	190	1.75	0.00	4.58	1.15	1.34
-25	(-13)	1148	289	336	217	1.80	0.00	5.29	1.33	1.55
-20	(- 4)	1486	375	436	244	1.87	0.00	6.07	1.53	1.78
-15	(+ 5)	1885	475	552	272	1.95	0.00	6.91	1.74	2.03
-10	(+14)	2346	591	688	301	2.04	0.00	7.79	1.96	2.28
-5	(+23)	2872	724	842	331	2.13	0.00	8.70	2.19	2.55

TEST CONDITIONS: @220V50Hz			ASHRAE32 Fan		(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)	571	144	167	165	1.70	0.00	3.48	0.88	1.02
-30	(-22)	789	199	231	194	1.76	0.00	4.07	1.02	1.19
-25	(-13)	1062	268	311	224	1.82	0.00	4.73	1.19	1.39
-20	(- 4)	1393	351	408	256	1.90	0.00	5.44	1.37	1.59
-15	(+ 5)	1784	450	523	288	1.99	0.00	6.19	1.56	1.81
-10	(+14)	2237	564	655	322	2.10	0.00	6.95	1.75	2.04
-5	(+23)	2755	694	807	357	2.22	0.00	7.72	1.95	2.26

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Fan			(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)	489	123	143	162	1.70	0.00	3.02	0.76	0.88
-30	(-22)	696	175	204	194	1.76	0.00	3.59	0.90	1.05
-25	(-13)	959	242	281	228	1.83	0.00	4.21	1.06	1.23
-20	(- 4)	1279	322	375	263	1.92	0.00	4.87	1.23	1.43
-15	(+ 5)	1659	418	486	300	2.03	0.00	5.54	1.40	1.62
-10	(+14)	2101	530	616	339	2.15	0.00	6.20	1.56	1.82
-5	(+23)	2608	657	764	381	2.30	0.00	6.84	1.72	2.01

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		
3.1.2 Shape	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
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		