COMPRESSOR DEFINITION

Designation	**F FU160UAX**
Nominal Voltage/Frequency	**115-127 V 60 Hz**
Engineering Number	**513200964**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
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	CSIR		
6 Starting torque	HST - Hight starting torque		
7 Expantion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Fan	-	98 to 140 V
8.2 LBP (43ºC Ambient temperature)	Fan	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	18.4	[kgf/cm²] (262 psig)	/ ºC - ºF
9.2 Peak (gauge)	20.6	[kgf/cm²] (293 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	7.95	[cm³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
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)	11.39	[kg] (25.11 lb.)
5 Nitrogen charge	-	[kgf/cm²]

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	213516051	
3 Start capacitor	378-454(150)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	5TM811KFBZZ-53	
6 Start winding resistance	3.75	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	1.10	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	41.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	8.50	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	9.50	[A] - Measured according to UL 984
11 Approval boards certification	TUV - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**ASHRAELBP32**			Evaporating temperature		**-23.3°C (-9.94°F)**
@115V60Hz			**Fan**			(Condensing temperature		**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]
1670	421	489	318	4.47	4.97	5.25	1.32	1.54

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **35ºC (+95ºF))**			
@115V60Hz		**Fan**								
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)**	1068	269	313	226	4.01	3.16	4.70	1.18	1.38
-30	**(-22)**	1365	344	400	250	4.09	4.05	5.44	1.37	1.59
-25	**(-13)**	1701	429	499	272	4.18	5.06	6.25	1.58	1.83
-20	**(- 4)**	2093	527	613	292	4.29	6.25	7.18	1.81	2.11
-15	**(+ 5)**	2555	644	749	311	4.40	7.65	8.25	2.08	2.42
-10	**(+14)**	3101	781	909	327	4.51	9.33	9.50	2.39	2.78
-5	**(+23)**	3747	944	1098	342	4.60	11.34	10.94	2.76	3.21

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **45ºC (+113ºF))**			
@115V60Hz		**Fan**								
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)**	1026	258	301	240	4.08	3.03	4.29	1.08	1.26
-30	**(-22)**	1317	332	386	267	4.18	3.91	4.92	1.24	1.44
-25	**(-13)**	1647	415	482	294	4.31	4.90	5.59	1.41	1.64
-20	**(- 4)**	2029	511	595	319	4.46	6.05	6.35	1.60	1.86
-15	**(+ 5)**	2481	625	727	344	4.61	7.43	7.22	1.82	2.11
-10	**(+14)**	3016	760	884	367	4.76	9.07	8.22	2.07	2.41
-5	**(+23)**	3649	920	1069	389	4.90	11.04	9.40	2.37	2.75

TEST CONDITIONS:		**ASHRAE32**					(Condensing temperature **55ºC (+131ºF))**			
@115V60Hz		**Fan**								
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)**	997	251	292	248	4.10	2.95	4.01	1.01	1.18
-30	**(-22)**	1283	323	376	280	4.24	3.80	4.57	1.15	1.34
-25	**(-13)**	1605	404	470	311	4.41	4.77	5.15	1.30	1.51
-20	**(- 4)**	1979	499	580	342	4.60	5.90	5.78	1.46	1.69
-15	**(+ 5)**	2420	610	709	372	4.80	7.25	6.49	1.63	1.90
-10	**(+14)**	2943	742	862	403	5.00	8.85	7.30	1.84	2.14
-5	**(+23)**	3563	898	1044	433	5.19	10.77	8.25	2.08	2.42

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**

@115V60Hz **Fan**

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)**	889	224	261	252	4.10	2.63	3.53	0.89	1.03
-30	**(-22)**	1169	295	342	287	4.28	3.47	4.07	1.03	1.19
-25	**(-13)**	1483	374	435	324	4.50	4.41	4.60	1.16	1.35
-20	**(- 4)**	1848	466	542	360	4.74	5.51	5.14	1.30	1.51
-15	**(+ 5)**	2279	574	668	397	4.99	6.82	5.73	1.45	1.68
-10	**(+14)**	2790	703	818	435	5.25	8.39	6.40	1.61	1.88
-5	**(+23)**	3397	856	995	473	5.51	10.27	7.18	1.81	2.10

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
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	Straight		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		