COMPRESSOR DEFINITION

Designation	**F FU160HAX**
Nominal Voltage/Frequency	**115 V 60 Hz**
Engineering Number	**513203003**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	115 / 60	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Light Commercial)		
4.1 Evaporating temperature range	-35°C to 0°C	(-31°F to 32°F)	
5 Motor type	CSIR		
6 Starting torque	LST/HST - Low/Hight starting sorque		
7 Expantion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm²] (202 psig)	/ ºC - ºF
9.2 Peak	15.9	[kgf/cm²] (226 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	12.92	[cm³] (0.788 cu.in)
2.1 Bore [mm]	28.000	
2.2 Stroke [mm]	21.000	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	10.94	[kg] (24.12 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	213516051	
3 Start capacitor	378-454(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MST18AFK-5590	
6 Start winding resistance	4.51	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	1.09	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	44.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	8.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	9.80	[A] - Measured according to UL 984
11 Approval boards certification	CE - UKCA - 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 (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]
1516	382	444	327	5.05	8.61	4.64	1.17	1.36

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@115V60Hz **Fan**

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]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	936	236	274	194	3.99	5.30	4.83	1.22	1.42
-30	**(-22)**	1229	310	360	239	4.39	6.97	5.16	1.30	1.51
-25	**(-13)**	1578	398	462	281	4.69	8.96	5.64	1.42	1.65
-20	**(- 4)**	1997	503	585	320	4.91	11.37	6.25	1.57	1.83
-15	**(+ 5)**	2499	630	732	358	5.11	14.27	6.97	1.76	2.04
-10	**(+14)**	3097	781	908	396	5.34	17.75	7.80	1.96	2.28
-5	**(+23)**	3804	959	1115	436	5.65	21.89	8.70	2.19	2.55
0	**(+32)**	4632	1167	1357	479	6.06	26.78	9.68	2.44	2.84

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@115V60Hz **Fan**

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]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	864	218	253	208	4.20	4.89	4.14	1.04	1.21
-30	**(-22)**	1150	290	337	254	4.57	6.52	4.51	1.14	1.32
-25	**(-13)**	1495	377	438	298	4.84	8.49	5.01	1.26	1.47
-20	**(- 4)**	1910	481	560	341	5.05	10.87	5.60	1.41	1.64
-15	**(+ 5)**	2411	607	706	384	5.25	13.76	6.27	1.58	1.84
-10	**(+14)**	3008	758	881	428	5.47	17.23	7.02	1.77	2.06
-5	**(+23)**	3716	936	1089	475	5.78	21.38	7.82	1.97	2.29
0	**(+32)**	4546	1146	1332	526	6.22	26.28	8.66	2.18	2.54

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@115V60Hz **Fan**

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]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	**(-31)**	748	189	219	213	4.30	4.23	3.51	0.88	1.03
-30	**(-22)**	1033	260	303	262	4.67	5.85	3.94	0.99	1.15
-25	**(-13)**	1377	347	403	310	4.96	7.82	4.45	1.12	1.30
-20	**(- 4)**	1794	452	526	357	5.19	10.21	5.03	1.27	1.47
-15	**(+ 5)**	2297	579	673	406	5.41	13.11	5.67	1.43	1.66
-10	**(+14)**	2899	731	849	458	5.68	16.61	6.34	1.60	1.86
-5	**(+23)**	3612	910	1058	513	6.04	20.78	7.04	1.77	2.06
0	**(+32)**	4450	1121	1304	574	6.53	25.72	7.74	1.95	2.27

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		