COMPRESSOR DEFINITION

Designation	**F FU160UAX**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513200907**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
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	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	187 to 255 V	-
8.2 LBP (43ºC Ambient temperature)	Fan	187 to 255 V	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	19.1	[kgf/cm²] (272 psig)	/ ºC - ºF
9.2 Peak (gauge)	21.2	[kgf/cm²] (301 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)	10	[kg] (22.05 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELETRICAL 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	213516450	
3 Start capacitor	108-130(250)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM762MDBYY-53	
6 Start winding resistance	12.20	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	5.98	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	21.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	3.00	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	3.35	[A] - Measured according to UL 984
11 Approval boards certification	CCC - VDE	

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]
1363	343	399	275	2.26	4.06	4.96	1.25	1.45

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V50Hz **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)**	878	221	257	201	2.12	0.00	4.36	1.10	1.28
-30	**(-22)**	1154	291	338	221	2.16	0.00	5.19	1.31	1.52
-25	**(-13)**	1451	366	425	241	2.20	0.00	6.03	1.52	1.77
-20	**(- 4)**	1782	449	522	258	2.24	0.00	6.92	1.75	2.03
-15	**(+ 5)**	2160	544	633	274	2.26	0.00	7.93	2.00	2.32
-10	**(+14)**	2596	654	761	287	2.28	0.00	9.09	2.29	2.66
-5	**(+23)**	3103	782	909	296	2.30	0.00	10.44	2.63	3.06

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V50Hz **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)**	816	206	239	208	2.11	0.00	3.94	0.99	1.16
-30	**(-22)**	1075	271	315	230	2.16	0.00	4.66	1.17	1.37
-25	**(-13)**	1357	342	398	252	2.20	0.00	5.36	1.35	1.57
-20	**(- 4)**	1675	422	491	274	2.25	0.00	6.09	1.53	1.78
-15	**(+ 5)**	2040	514	598	295	2.29	0.00	6.89	1.74	2.02
-10	**(+14)**	2465	621	722	315	2.34	0.00	7.81	1.97	2.29
-5	**(+23)**	2963	747	868	333	2.39	0.00	8.90	2.24	2.61

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V50Hz **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)**	774	195	227	217	2.13	0.00	3.59	0.90	1.05
-30	**(-22)**	1015	256	297	239	2.17	0.00	4.25	1.07	1.24
-25	**(-13)**	1281	323	375	264	2.21	0.00	4.85	1.22	1.42
-20	**(- 4)**	1583	399	464	290	2.27	0.00	5.45	1.37	1.60
-15	**(+ 5)**	1934	487	567	316	2.34	0.00	6.09	1.54	1.78
-10	**(+14)**	2347	591	688	343	2.41	0.00	6.82	1.72	2.00
-5	**(+23)**	2833	714	830	369	2.49	0.00	7.70	1.94	2.26

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@220V50Hz **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)**	726	183	213	226	2.14	0.00	3.18	0.80	0.93
-30	**(-22)**	947	239	277	249	2.18	0.00	3.81	0.96	1.12
-25	**(-13)**	1194	301	350	276	2.23	0.00	4.36	1.10	1.28
-20	**(- 4)**	1479	373	433	304	2.29	0.00	4.88	1.23	1.43
-15	**(+ 5)**	1815	457	532	335	2.38	0.00	5.41	1.36	1.59
-10	**(+14)**	2213	558	648	368	2.48	0.00	6.00	1.51	1.76
-5	**(+23)**	2686	677	787	401	2.59	0.00	6.69	1.69	1.96

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		