COMPRESSOR DEFINITION

Designation	**F F8,5BKW**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513206267**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	Blend		
3 Nominal voltage and frequency	220-240 / 50	[V / Hz]	
4 Application type	Low-Medium-High Back Pressure		
4.1 Evaporating temperature range	-35°C to 15°C	(-31°F to 59°F)	
5 Motor type	RSIR/CSIR		
6 Starting torque	LST - Low Starting Torque		
7 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	198 to 255 V	-
8.2 LBP (43ºC Ambient temperature)	Static	198 to 255 V	-
8.3 HBP (32ºC Ambient temperature)	Fan	198 to 255 V	-
8.4 HBP (43ºC Ambient temperature)	Fan	198 to 255 V	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	14.5	[kgf/cm²] (206 psig)	/ ºC - ºF
9.2 Peak (gauge)	18.2	[kgf/cm²] (259 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[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	420	[ml] (14.20 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO32	
4 Weight (with oil charge)	10.53	[kg] (23.21 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

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	213510240/213510630	
3 Start capacitor	108-130(180)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRP63AML-6	
6 Start winding resistance	36.00	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	10.32	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	12.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	1.70	[A] - Measured according to UL 984
11 Approval boards certification	IRAM	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V50Hz**			**ASHRAEHBP32** **Fan**		Evaporating temperature (Condensing temperature	**7.2°C (44.96°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]
2567	647	752	352	1.94	19.22	7.29	1.84	2.14

TEST CONDITIONS: **@220V50Hz**			**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]
715	180	210	185	1.16	5.23	3.86	0.97	1.13

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V50Hz** — **ASHRAE32** **Static** — (Condensing temperature **45ºC (+113ºF))**

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)**	436	110	128	126	0.97	3.18	3.45	0.87	1.01
-30	**(-22)**	546	137	160	151	1.03	3.99	3.65	0.92	1.07
-25	**(-13)**	693	175	203	177	1.11	5.07	3.95	0.99	1.16
-20	**(- 4)**	880	222	258	204	1.20	6.45	4.34	1.09	1.27
-15	**(+ 5)**	1109	279	325	230	1.31	8.15	4.81	1.21	1.41
-10	**(+14)**	1381	348	405	257	1.42	10.17	5.36	1.35	1.57
-5	**(+23)**	1697	428	497	284	1.55	12.55	5.96	1.50	1.74
0	**(+32)**	2059	519	603	312	1.69	15.30	6.60	1.66	1.93
+5	**(+41)**	2469	622	724	340	1.85	18.45	7.27	1.83	2.13
+10	**(+50)**	2929	738	858	368	2.02	22.01	7.97	2.01	2.33
+15	**(+59)**	3440	867	1008	397	2.21	26.01	8.67	2.18	2.54

TEST CONDITIONS: **@220V50Hz** — **ASHRAE32** **Static** — (Condensing temperature **55ºC (+131ºF))**

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)**	413	104	121	126	0.97	3.01	3.23	0.81	0.95
-30	**(-22)**	516	130	151	151	1.03	3.77	3.43	0.86	1.00
-25	**(-13)**	656	165	192	177	1.11	4.80	3.73	0.94	1.09
-20	**(- 4)**	835	210	245	204	1.20	6.12	4.11	1.04	1.21
-15	**(+ 5)**	1054	266	309	230	1.31	7.75	4.58	1.15	1.34
-10	**(+14)**	1316	332	386	257	1.42	9.69	5.11	1.29	1.50
-5	**(+23)**	1621	408	475	284	1.55	11.99	5.70	1.44	1.67
0	**(+32)**	1972	497	578	312	1.69	14.65	6.33	1.59	1.85
+5	**(+41)**	2369	597	694	340	1.85	17.70	6.98	1.76	2.05
+10	**(+50)**	2815	709	825	368	2.02	21.16	7.66	1.93	2.25
+15	**(+59)**	3311	834	970	397	2.21	25.04	8.34	2.10	2.45

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **65ºC (+149ºF))**
@220V50Hz **Static**

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)**	359	91	105	126	0.97	2.62	2.87	0.72	0.84
-30	**(-22)**	460	116	135	151	1.03	3.36	3.08	0.78	0.90
-25	**(-13)**	596	150	175	177	1.11	4.37	3.39	0.85	0.99
-20	**(- 4)**	770	194	226	204	1.20	5.65	3.79	0.95	1.11
-15	**(+ 5)**	984	248	288	230	1.31	7.23	4.26	1.07	1.25
-10	**(+14)**	1240	312	363	257	1.42	9.14	4.80	1.21	1.41
-5	**(+23)**	1538	387	451	284	1.55	11.38	5.39	1.36	1.58
0	**(+32)**	1880	474	551	312	1.69	13.98	6.02	1.52	1.76
+5	**(+41)**	2268	572	665	340	1.85	16.95	6.68	1.68	1.96
+10	**(+50)**	2705	682	793	368	2.02	20.33	7.36	1.85	2.16
+15	**(+59)**	3190	804	935	397	2.21	24.13	8.04	2.03	2.36

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
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)	6.5 +0.09/-0.09	[mm]	(0.256" +0.004"/-0.004")
3.5 Connector sealing	Rubber Plugs		