

### COMPRESSOR DEFINITION

Designation	<b>NB 1118Z</b>
Nominal Voltage/Frequency	<b>220-240 V 50 Hz</b>
Engineering Number	<b>294UA47</b>

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	220-240 / 50	[ V / Hz ]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSIR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	198 to 254 V	-
8.2 LBP (43°C Ambient temperature)	Static	198 to 254 V	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	8.06	[cm <sup>3</sup> ] (0.492 cu.in)
2.1 Bore [mm]	25.397	
2.2 Stroke [mm]	15.920	
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)	10.45	[kg] (23.04 lb.)
5 Nitrogen charge	-	[kgf/cm <sup>2</sup> ]

### C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	MSDA3	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	4TM743LFBYY-53	
6 Start winding resistance	49.00	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[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)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMQ	

### D - PERFORMANCE - CHECK POINT DATA

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]
655	165	192	163	1.15	3.72	4.01	1.01	1.18

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static				(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)	381	96	112	112	1.02	2.15	3.39	0.85	0.99
-30	(-22)	527	133	154	130	1.06	2.99	4.05	1.02	1.19
-25	(-13)	707	178	207	150	1.11	4.01	4.72	1.19	1.38
-20	(- 4)	924	233	271	171	1.18	5.26	5.39	1.36	1.58
-15	(+ 5)	1184	298	347	194	1.25	6.76	6.10	1.54	1.79
-10	(+14)	1492	376	437	217	1.34	8.55	6.85	1.73	2.01

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static				(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)	333	84	98	113	1.01	1.89	2.95	0.74	0.87
-30	(-22)	477	120	140	132	1.06	2.70	3.61	0.91	1.06
-25	(-13)	652	164	191	154	1.12	3.70	4.24	1.07	1.24
-20	(- 4)	864	218	253	177	1.19	4.92	4.88	1.23	1.43
-15	(+ 5)	1117	282	327	202	1.28	6.38	5.52	1.39	1.62
-10	(+14)	1417	357	415	229	1.38	8.12	6.18	1.56	1.81

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static				(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)	275	69	81	109	1.01	1.56	2.52	0.64	0.74
-30	(-22)	415	105	122	130	1.05	2.35	3.17	0.80	0.93
-25	(-13)	586	148	172	155	1.12	3.33	3.78	0.95	1.11
-20	(- 4)	792	200	232	181	1.21	4.51	4.36	1.10	1.28
-15	(+ 5)	1038	262	304	210	1.31	5.93	4.94	1.24	1.45
-10	(+14)	1329	335	390	241	1.43	7.62	5.52	1.39	1.62

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static			(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)	211	53	62	99	0.98	1.19	2.14	0.54	0.63
-30	(-22)	347	87	102	124	1.04	1.97	2.78	0.70	0.81
-25	(-13)	513	129	150	152	1.11	2.91	3.36	0.85	0.98
-20	(- 4)	712	180	209	183	1.21	4.05	3.89	0.98	1.14
-15	(+ 5)	951	240	279	216	1.33	5.43	4.40	1.11	1.29
-10	(+14)	1233	311	361	252	1.46	7.06	4.89	1.23	1.43

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
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	Slanted 42°		
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	Slanted parallel to Base Plate		
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	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		