

COMPRESSOR DEFINITION

Designation	NB U1112Y
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	813AA68

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
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	RSCR		
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)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	8.77	[cm ³] (0.535 cu.in)
2.1 Bore [mm]	26.497	
2.2 Stroke [mm]	15.920	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	10.75	[kg] (23.70 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

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	2019	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	4(450)	[µF(VAC minimum)]
5 Motor protection	AD25FQ10	
6 Start winding resistance	19.70	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	19.60	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	4.40	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.39	[A]
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A]
11 Approval boards certification	VDE	

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]
498	125	146	90	0.42	1.56	5.54	1.40	1.62

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)	304	77	89	64	0.00	0.95	4.75	1.20	1.39
-30	(-22)	397	100	116	71	0.00	1.24	5.59	1.41	1.64
-25	(-13)	517	130	151	79	0.00	1.62	6.51	1.64	1.91
-20	(- 4)	664	167	194	88	0.00	2.08	7.52	1.90	2.20
-15	(+ 5)	837	211	245	97	0.00	2.63	8.62	2.17	2.53
-10	(+14)	1036	261	303	106	0.00	3.27	9.82	2.47	2.88

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)	269	68	79	64	0.00	0.84	4.21	1.06	1.23
-30	(-22)	363	92	106	73	0.00	1.14	5.00	1.26	1.46
-25	(-13)	484	122	142	83	0.00	1.52	5.82	1.47	1.71
-20	(- 4)	632	159	185	94	0.00	1.99	6.70	1.69	1.96
-15	(+ 5)	805	203	236	105	0.00	2.53	7.62	1.92	2.23
-10	(+14)	1004	253	294	117	0.00	3.17	8.61	2.17	2.52

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)	234	59	69	64	0.00	0.73	3.69	0.93	1.08
-30	(-22)	328	83	96	74	0.00	1.03	4.46	1.12	1.31
-25	(-13)	449	113	131	86	0.00	1.41	5.22	1.32	1.53
-20	(- 4)	595	150	174	99	0.00	1.87	6.00	1.51	1.76
-15	(+ 5)	767	193	225	113	0.00	2.42	6.78	1.71	1.99
-10	(+14)	965	243	283	127	0.00	3.04	7.59	1.91	2.22

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)	196	49	58	62	0.00	0.62	3.15	0.79	0.92
-30	(-22)	289	73	85	74	0.00	0.91	3.93	0.99	1.15
-25	(-13)	408	103	119	87	0.00	1.28	4.67	1.18	1.37
-20	(- 4)	552	139	162	103	0.00	1.74	5.38	1.35	1.58
-15	(+ 5)	722	182	211	119	0.00	2.27	6.06	1.53	1.78
-10	(+14)	916	231	268	137	0.00	2.89	6.72	1.69	1.97

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 B.Plate 30°		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		