

COMPRESSOR DEFINITION

Designation	NB T1116Y
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	851AA12

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	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)	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	12.11	[cm ³] (0.739 cu.in)
2.1 Bore [mm]	27.775	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO10	
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	-	[µF(VAC minimum)]
5 Motor protection	AD55BU10	
6 Start winding resistance	17.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.20	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	5.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.75	[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]
678	171	199	133	0.78	2.13	5.09	1.28	1.49

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)	406	102	119	89	0.63	1.27	4.57	1.15	1.34
-30 (-22)	532	134	156	102	0.67	1.67	5.23	1.32	1.53
-25 (-13)	683	172	200	115	0.71	2.14	5.95	1.50	1.74
-20 (- 4)	863	217	253	128	0.76	2.71	6.73	1.70	1.97
-15 (+ 5)	1078	272	316	141	0.81	3.39	7.60	1.92	2.23
-10 (+14)	1334	336	391	155	0.88	4.21	8.56	2.16	2.51

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)	378	95	111	90	0.63	1.18	4.21	1.06	1.23
-30 (-22)	507	128	149	106	0.68	1.59	4.79	1.21	1.40
-25 (-13)	657	166	192	122	0.73	2.06	5.40	1.36	1.58
-20 (- 4)	832	210	244	138	0.78	2.62	6.04	1.52	1.77
-15 (+ 5)	1039	262	305	154	0.85	3.27	6.73	1.69	1.97
-10 (+14)	1283	323	376	172	0.92	4.05	7.47	1.88	2.19

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)	333	84	98	88	0.63	1.04	3.77	0.95	1.10
-30 (-22)	468	118	137	107	0.69	1.47	4.33	1.09	1.27
-25 (-13)	619	156	181	127	0.75	1.94	4.88	1.23	1.43
-20 (- 4)	792	200	232	146	0.82	2.49	5.43	1.37	1.59
-15 (+ 5)	993	250	291	166	0.90	3.13	5.99	1.51	1.76
-10 (+14)	1227	309	359	186	0.98	3.87	6.58	1.66	1.93

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)	271	68	79	88	0.63	0.85	3.11	0.78	0.91
-30	(-22)	413	104	121	110	0.70	1.30	3.71	0.93	1.09
-25	(-13)	568	143	166	133	0.78	1.78	4.26	1.07	1.25
-20	(- 4)	741	187	217	155	0.86	2.33	4.78	1.20	1.40
-15	(+ 5)	938	236	275	179	0.96	2.95	5.27	1.33	1.54
-10	(+14)	1164	293	341	203	1.06	3.67	5.75	1.45	1.68

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	5.1 +0.10/+0.00	[mm]	(0.201" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted parallel to Base Plate		
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		