

COMPRESSOR DEFINITION

Designation	NB T1112Y
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	810BA47

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-RSCR		
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 (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 temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	8.77	[cm³] (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	MINERAL / ISO10	
4 Weight (with oil charge)	10.17	[kg] (22.42 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	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	24.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.50	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	4.50	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.43	[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]
466	117	137	92	0.42	1.46	5.08	1.28	1.49

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32		(Condensing temperature 45°C (+113°F))							
@220V50Hz		Static									
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35	(-31)	254	64	75	65	0.82	0.80	3.89	0.98	1.14	
-30	(-22)	347	87	102	76	0.69	1.09	4.55	1.15	1.33	
-25	(-13)	462	116	135	87	0.63	1.45	5.31	1.34	1.56	
-20	(- 4)	601	151	176	98	0.63	1.89	6.14	1.55	1.80	
-15	(+ 5)	767	193	225	109	0.67	2.41	7.02	1.77	2.06	
-10	(+14)	962	242	282	121	0.73	3.04	7.91	1.99	2.32	

TEST CONDITIONS: @220V50Hz		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	210	53	61	71	0.55	0.66	2.96	0.75	0.87
-30	(-22)	305	77	89	82	0.55	0.96	3.71	0.93	1.09
-25	(-13)	420	106	123	93	0.60	1.32	4.52	1.14	1.32
-20	(- 4)	558	141	164	104	0.67	1.75	5.37	1.35	1.57
-15	(+ 5)	721	182	211	116	0.74	2.27	6.23	1.57	1.82
-10	(+14)	910	229	267	129	0.81	2.87	7.07	1.78	2.07

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		