

COMPRESSOR DEFINITION

Designation	NB U1118Y
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	814CA45

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 temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	14.28	[cm ³] (0.871 cu.in)
2.1 Bore [mm]	30.157	
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 / ISO7	
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	AD18BQ10	
6 Start winding resistance	14.70	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.90	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	6.80	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	0.68	[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]
839	211	246	148	0.71	2.63	5.67	1.43	1.66

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)	495	125	145	96	0.51	1.55	5.13	1.29	1.50
-30 (-22)	640	161	188	110	0.56	2.01	5.84	1.47	1.71
-25 (-13)	822	207	241	124	0.62	2.58	6.61	1.67	1.94
-20 (- 4)	1047	264	307	140	0.68	3.29	7.44	1.88	2.18
-15 (+ 5)	1318	332	386	158	0.75	4.15	8.32	2.10	2.44
-10 (+14)	1641	414	481	177	0.83	5.18	9.23	2.33	2.71

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)	457	115	134	101	0.52	1.43	4.57	1.15	1.34
-30 (-22)	602	152	176	117	0.58	1.89	5.16	1.30	1.51
-25 (-13)	781	197	229	135	0.65	2.45	5.80	1.46	1.70
-20 (- 4)	999	252	293	154	0.73	3.14	6.48	1.63	1.90
-15 (+ 5)	1260	318	369	175	0.81	3.97	7.18	1.81	2.10
-10 (+14)	1570	396	460	199	0.91	4.95	7.90	1.99	2.31

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)	439	111	129	100	0.53	1.37	4.34	1.09	1.27
-30 (-22)	587	148	172	120	0.60	1.84	4.87	1.23	1.43
-25 (-13)	767	193	225	141	0.68	2.41	5.44	1.37	1.59
-20 (- 4)	981	247	288	163	0.77	3.08	6.01	1.52	1.76
-15 (+ 5)	1236	311	362	187	0.87	3.89	6.60	1.66	1.93
-10 (+14)	1536	387	450	214	0.99	4.85	7.17	1.81	2.10

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)	387	97	113	101	0.52	1.21	3.82	0.96	1.12
-30	(-22)	542	137	159	124	0.61	1.70	4.35	1.10	1.28
-25	(-13)	725	183	212	148	0.71	2.28	4.89	1.23	1.43
-20	(- 4)	940	237	275	174	0.82	2.95	5.42	1.37	1.59
-15	(+ 5)	1191	300	349	201	0.94	3.75	5.94	1.50	1.74
-10	(+14)	1484	374	435	232	1.07	4.68	6.43	1.62	1.88

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.45 +0.10/+0.00	[mm]	(0.254" +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	6.45 +0.10/+0.00	[mm]	(0.254" +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		