

### COMPRESSOR DEFINITION

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

### 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 <sup>2</sup> ] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm <sup>2</sup> ] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	14.28	[cm <sup>3</sup> ] (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 <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	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			CECOMAFLBP Static		Evaporating temperature (Condensing temperature		-25°C (-13°F) 55°C (131°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]
631	159	185	141	0.68	2.41	4.47	1.13	1.31

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			CECOMAF 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)	485	122	142	96	0.51	1.55	5.02	1.27	1.47
-30 (-22)	624	157	183	110	0.56	2.00	5.69	1.43	1.67
-25 (-13)	802	202	235	125	0.62	2.58	6.44	1.62	1.89
-20 (- 4)	1024	258	300	141	0.68	3.29	7.24	1.83	2.12
-15 (+ 5)	1291	325	378	159	0.75	4.15	8.11	2.04	2.38
-10 (+14)	1607	405	471	177	0.83	5.18	9.04	2.28	2.65

TEST CONDITIONS: @220V50Hz			CECOMAF 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)	414	104	121	100	0.52	1.43	4.15	1.05	1.22
-30 (-22)	542	137	159	116	0.58	1.89	4.69	1.18	1.37
-25 (-13)	704	177	206	134	0.65	2.45	5.28	1.33	1.55
-20 (- 4)	901	227	264	153	0.73	3.14	5.90	1.49	1.73
-15 (+ 5)	1138	287	333	173	0.81	3.98	6.56	1.65	1.92
-10 (+14)	1418	357	416	195	0.91	4.96	7.26	1.83	2.13

TEST CONDITIONS: @220V50Hz			CECOMAF 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)	363	91	106	102	0.52	1.38	3.55	0.89	1.04
-30 (-22)	484	122	142	120	0.60	1.84	3.99	1.01	1.17
-25 (-13)	631	159	185	141	0.68	2.41	4.46	1.12	1.31
-20 (- 4)	808	204	237	163	0.77	3.09	4.94	1.25	1.45
-15 (+ 5)	1018	257	298	187	0.87	3.90	5.44	1.37	1.59
-10 (+14)	1264	319	371	213	0.98	4.85	5.94	1.50	1.74

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz		CECOMAF 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)	290	73	85	101	0.52	1.23	2.89	0.73	0.85
-30	(-22)	406	102	119	123	0.61	1.71	3.28	0.83	0.96
-25	(-13)	542	137	159	147	0.71	2.29	3.66	0.92	1.07
-20	(- 4)	701	177	205	174	0.82	2.97	4.04	1.02	1.18
-15	(+ 5)	887	224	260	202	0.94	3.77	4.41	1.11	1.29
-10	(+14)	1103	278	323	233	1.07	4.70	4.76	1.20	1.39

### 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		