

COMPRESSOR DEFINITION

Designation	NB U1116Y
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	815CA47

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	12.11	[cm ³] (0.739 cu.in)
2.1 Bore [mm]	27.775	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	280	[ml] (9.47 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	10.73	[kg] (23.66 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	AD55BU10	
6 Start winding resistance	20.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	18.70	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50 Hz)	-	[A] - Measured according to UL 984
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]
699	176	205	122	0.56	2.19	5.72	1.44	1.68

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)	433	109	127	79	0.37	1.36	5.48	1.38	1.61
-30	(-22)	542	137	159	91	0.42	1.70	6.01	1.52	1.76
-25	(-13)	695	175	204	103	0.47	2.18	6.79	1.71	1.99
-20	(- 4)	894	225	262	115	0.53	2.81	7.77	1.96	2.28
-15	(+ 5)	1141	287	334	127	0.58	3.59	8.94	2.25	2.62
-10	(+14)	1437	362	421	140	0.63	4.53	10.28	2.59	3.01

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)	424	107	124	84	0.39	1.33	5.08	1.28	1.49
-30	(-22)	531	134	156	97	0.45	1.67	5.51	1.39	1.62
-25	(-13)	678	171	199	111	0.51	2.13	6.13	1.55	1.80
-20	(- 4)	867	219	254	125	0.57	2.72	6.91	1.74	2.02
-15	(+ 5)	1100	277	322	140	0.64	3.46	7.82	1.97	2.29
-10	(+14)	1379	348	404	156	0.71	4.35	8.83	2.23	2.59

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)	390	98	114	86	0.40	1.22	4.53	1.14	1.33
-30	(-22)	499	126	146	101	0.47	1.56	4.95	1.25	1.45
-25	(-13)	645	162	189	117	0.54	2.02	5.51	1.39	1.61
-20	(- 4)	828	209	243	134	0.61	2.60	6.16	1.55	1.81
-15	(+ 5)	1052	265	308	152	0.69	3.31	6.89	1.74	2.02
-10	(+14)	1318	332	386	172	0.78	4.16	7.67	1.93	2.25

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)	330	83	97	87	0.41	1.03	3.77	0.95	1.11
-30	(-22)	447	113	131	104	0.48	1.40	4.28	1.08	1.25
-25	(-13)	595	150	174	122	0.56	1.87	4.85	1.22	1.42
-20	(- 4)	777	196	228	142	0.65	2.44	5.46	1.38	1.60
-15	(+ 5)	996	251	292	164	0.74	3.14	6.10	1.54	1.79
-10	(+14)	1253	316	367	187	0.85	3.96	6.73	1.70	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 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		