

COMPRESSOR DEFINITION

Designation	NB U1118Y.
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	815DA45

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	280	[ml] (9.47 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	22.90	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	15.68	[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]
804	203	236	142	0.66	2.52	5.65	1.42	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)	507	128	149	92	0.46	1.59	5.53	1.39	1.62
-30 (-22)	625	158	183	105	0.51	1.96	6.02	1.52	1.77
-25 (-13)	790	199	232	118	0.56	2.48	6.73	1.70	1.97
-20 (- 4)	1009	254	296	132	0.62	3.17	7.63	1.92	2.24
-15 (+ 5)	1288	325	377	147	0.69	4.05	8.70	2.19	2.55
-10 (+14)	1634	412	479	164	0.76	5.15	9.93	2.50	2.91

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)	487	123	143	97	0.47	1.52	5.01	1.26	1.47
-30 (-22)	607	153	178	111	0.53	1.90	5.47	1.38	1.60
-25 (-13)	768	194	225	127	0.60	2.41	6.08	1.53	1.78
-20 (- 4)	977	246	286	143	0.66	3.07	6.84	1.72	2.00
-15 (+ 5)	1239	312	363	161	0.74	3.90	7.71	1.94	2.26
-10 (+14)	1563	394	458	180	0.83	4.93	8.68	2.19	2.54

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)	444	112	130	100	0.48	1.39	4.44	1.12	1.30
-30 (-22)	573	144	168	116	0.55	1.80	4.91	1.24	1.44
-25 (-13)	736	186	216	134	0.63	2.31	5.48	1.38	1.61
-20 (- 4)	941	237	276	153	0.71	2.96	6.14	1.55	1.80
-15 (+ 5)	1194	301	350	174	0.80	3.76	6.86	1.73	2.01
-10 (+14)	1502	379	440	197	0.90	4.74	7.63	1.92	2.24

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)	380	96	111	100	0.48	1.19	3.84	0.97	1.12
-30	(-22)	524	132	154	119	0.56	1.64	4.36	1.10	1.28
-25	(-13)	696	175	204	140	0.65	2.19	4.93	1.24	1.45
-20	(- 4)	904	228	265	163	0.75	2.84	5.54	1.40	1.62
-15	(+ 5)	1154	291	338	188	0.86	3.63	6.17	1.55	1.81
-10	(+14)	1452	366	426	215	0.98	4.58	6.79	1.71	1.99

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		