

COMPRESSOR DEFINITION

Designation	NT 2178GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	922VG02

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115 / 60	[V / Hz]	
4 Application type	Low Back Pressure R404A		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	CSCR		
6 Starting torque	HST - Hight starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	25.2	[kgf/cm ²] (358 psig)	/ °C - °F
9.2 Peak	28.3	[kgf/cm ²] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1	[hp]
2 Displacement	17.39	[cm ³] (1.061 cu.in)
2.1 Bore [mm]	34.120	
2.2 Stroke [mm]	19.030	
3 Lubricant charge	450	[ml] (15.22 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	17	[kg] (37.48 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	115 V 60 Hz 1~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA9AD3C-121	
3 Start capacitor	243-292(165)	[µF(VAC minimum)]
4 Run capacitor	35(440)	[µF(VAC minimum)]
5 Motor protection	UP14NC5245-T	
6 Start winding resistance	2.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V60Hz			ARILBP Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 48.9°C (120.02°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]
2541	640	745	735	7.41	26.31	3.46	0.87	1.01

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz		ARI4 Fan			(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]
-40	(-40)	1395	352	409	535	6.05	11.48	2.60	0.65	0.76
-35	(-31)	1856	468	544	609	6.56	15.39	3.05	0.77	0.89
-30	(-22)	2459	620	721	685	7.10	20.48	3.59	0.91	1.05
-25	(-13)	3204	808	939	762	7.68	26.85	4.20	1.06	1.23
-20	(- 4)	4091	1031	1199	840	8.30	34.58	4.87	1.23	1.43
-15	(+ 5)	5119	1290	1500	919	8.95	43.73	5.57	1.40	1.63
-10	(+14)	6289	1585	1843	999	9.65	54.39	6.30	1.59	1.85

TEST CONDITIONS: @115V60Hz		ARI4 Fan			(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]
-40	(-40)	1018	257	298	527	5.89	9.64	1.95	0.49	0.57
-35	(-31)	1413	356	414	613	6.50	13.47	2.31	0.58	0.68
-30	(-22)	1929	486	565	701	7.16	18.49	2.75	0.69	0.81
-25	(-13)	2565	646	752	791	7.87	24.77	3.23	0.81	0.95
-20	(- 4)	3321	837	973	883	8.62	32.41	3.76	0.95	1.10
-15	(+ 5)	4197	1058	1230	976	9.42	41.47	4.30	1.08	1.26
-10	(+14)	5193	1309	1522	1071	10.27	52.03	4.85	1.22	1.42

TEST CONDITIONS: @115V60Hz		ARI4 Fan			(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]
-40	(-40)	722	182	212	496	5.77	8.16	1.45	0.36	0.42
-35	(-31)	1031	260	302	597	6.46	11.76	1.72	0.43	0.51
-30	(-22)	1438	362	421	700	7.21	16.54	2.05	0.52	0.60
-25	(-13)	1944	490	570	806	8.02	22.58	2.41	0.61	0.71
-20	(- 4)	2549	642	747	914	8.89	29.97	2.80	0.70	0.82
-15	(+ 5)	3253	820	953	1025	9.82	38.78	3.18	0.80	0.93
-10	(+14)	4055	1022	1188	1139	10.80	49.10	3.55	0.90	1.04

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	9.6 +0.07/+0.00	[mm]	(0.378" +0.003"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Vertical		
3.2 DISCHARGE	6.42 +0.08/+0.00	[mm]	(0.253" +0.003"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Vertical		
3.3 PROCESS	6.42 +0.08/+0.00	[mm]	(0.253" +0.003"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Vertical		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		