

COMPRESSOR DEFINITION

Designation	NT 2180GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	922HG02

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	20.44	[cm ³] (1.247 cu.in)
2.1 Bore [mm]	36.990	
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)	17.5	[kg] (38.58 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(250)	[µF(VAC minimum)]
4 Run capacitor	35(400)	[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]
2997	755	878	863	8.31	31.03	3.47	0.87	1.02

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)	1557	392	456	460	5.15	12.84	3.36	0.85	0.98
-35	(-31)	2192	552	642	579	6.04	18.14	3.81	0.96	1.12
-30	(-22)	2940	741	861	688	6.88	24.46	4.29	1.08	1.26
-25	(-13)	3788	955	1110	788	7.69	31.75	4.81	1.21	1.41
-20	(- 4)	4726	1191	1385	881	8.49	39.97	5.35	1.35	1.57
-15	(+ 5)	5742	1447	1683	971	9.29	49.07	5.90	1.49	1.73
-10	(+14)	6825	1720	2000	1060	10.11	59.01	6.45	1.62	1.89

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)	1063	268	311	463	5.18	10.05	2.31	0.58	0.68
-35	(-31)	1637	413	480	586	6.10	15.60	2.79	0.70	0.82
-30	(-22)	2303	580	675	702	7.00	22.09	3.27	0.82	0.96
-25	(-13)	3049	768	893	814	7.91	29.48	3.73	0.94	1.09
-20	(- 4)	3863	974	1132	923	8.83	37.72	4.18	1.05	1.22
-15	(+ 5)	4735	1193	1388	1033	9.80	46.78	4.59	1.16	1.34
-10	(+14)	5654	1425	1657	1144	10.83	56.61	4.95	1.25	1.45

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)	603	152	177	463	5.20	6.82	1.31	0.33	0.38
-35	(-31)	1091	275	320	590	6.13	12.46	1.83	0.46	0.54
-30	(-22)	1649	416	483	713	7.09	18.97	2.30	0.58	0.67
-25	(-13)	2267	571	664	836	8.09	26.31	2.72	0.69	0.80
-20	(- 4)	2932	739	859	961	9.15	34.43	3.07	0.77	0.90
-15	(+ 5)	3634	916	1065	1090	10.28	43.30	3.35	0.84	0.98
-10	(+14)	4361	1099	1278	1225	11.50	52.87	3.54	0.89	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		