

COMPRESSOR DEFINITION

Designation	NT 2180GKV
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	922QG02

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	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

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	RVA2AE3C-105	
3 Start capacitor	189-227(250)	[µF(VAC minimum)]
4 Run capacitor	25(400)	[µF(VAC minimum)]
5 Motor protection	GB3RNU0002	
6 Start winding resistance	2.91	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.45	[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]
3079	776	902	862	8.93	31.87	3.57	0.90	1.05

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)	1487	375	436	488	6.29	12.17	3.06	0.77	0.90
-35	(-31)	2199	554	644	581	6.85	18.23	3.77	0.95	1.11
-30	(-22)	3002	757	880	680	7.51	25.05	4.41	1.11	1.29
-25	(-13)	3895	982	1141	783	8.27	32.70	4.98	1.26	1.46
-20	(- 4)	4879	1230	1430	892	9.12	41.27	5.48	1.38	1.61
-15	(+ 5)	5953	1500	1744	1005	10.06	50.85	5.93	1.49	1.74
-10	(+14)	7118	1794	2086	1124	11.09	61.50	6.32	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)	1003	253	294	446	5.99	9.59	2.25	0.57	0.66
-35	(-31)	1556	392	456	557	6.63	14.84	2.79	0.70	0.82
-30	(-22)	2211	557	648	675	7.40	21.15	3.27	0.82	0.96
-25	(-13)	2969	748	870	800	8.32	28.61	3.71	0.93	1.09
-20	(- 4)	3829	965	1122	932	9.37	37.31	4.11	1.04	1.20
-15	(+ 5)	4791	1207	1404	1071	10.56	47.33	4.48	1.13	1.31
-10	(+14)	5855	1475	1716	1218	11.89	58.75	4.82	1.21	1.41

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)	674	170	197	428	5.98	7.61	1.56	0.39	0.46
-35	(-31)	1061	267	311	550	6.64	12.09	1.95	0.49	0.57
-30	(-22)	1562	394	458	680	7.48	17.96	2.31	0.58	0.68
-25	(-13)	2177	549	638	820	8.50	25.30	2.65	0.67	0.78
-20	(- 4)	2906	732	852	969	9.71	34.19	2.99	0.75	0.88
-15	(+ 5)	3749	945	1099	1127	11.10	44.71	3.31	0.84	0.97
-10	(+14)	4706	1186	1379	1295	12.67	56.96	3.64	0.92	1.07

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		