COMPRESSOR DEFINITION

Designation	**NT 2180GK**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**513308806**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	220-240 / 50	[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 Expantion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	25.2	[kgf/cm²] (358 psig)	/ ºC - ºF
9.2 Peak	28.3	[kgf/cm²] (402 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1	[hp]
2 Displacement	20.44	[cm³] (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)	17.4	[kg] (38.36 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm²] (2.84 to 4.27 psig)

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220-240 V 50 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA403C-123	
3 Start capacitor	130-156(330)	[µF(VAC minimum)]
4 Run capacitor	17.5(440)	[µF(VAC minimum)]
5 Motor protection	MRT26AKK-3261	
6 Start winding resistance	8.56	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	1.82	[Ω at 25ºC (77ºF)] +/- 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	CCC - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS:			**EN12900LBP**			Evaporating temperature		**-35°C (-31°F)**
@220V50Hz			**Fan**			(Condensing temperature		**40°C (104°F))**
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
1808	456	530	507	2.42	14.35	3.57	0.90	1.05

E - PERFORMANCE - CURVES

TEST CONDITIONS:		**EN12900**					(Condensing temperature **35ºC (+95ºF))**			
@220V50Hz		**Fan**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	1516	382	444	438	2.14	11.30	3.44	0.87	1.01
-35	**(-31)**	1992	502	584	501	2.39	14.90	4.00	1.01	1.17
-30	**(-22)**	2605	657	763	562	2.65	19.56	4.66	1.17	1.37
-25	**(-13)**	3359	847	984	622	2.92	25.35	5.40	1.36	1.58
-20	**(- 4)**	4258	1073	1248	685	3.20	32.35	6.20	1.56	1.82
-15	**(+ 5)**	5306	1337	1555	753	3.49	40.64	7.03	1.77	2.06
-10	**(+14)**	6507	1640	1907	827	3.79	50.27	7.87	1.98	2.31

TEST CONDITIONS:		**EN12900**					(Condensing temperature **45ºC (+113ºF))**			
@220V50Hz		**Fan**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	1158	292	339	429	2.10	9.75	2.70	0.68	0.79
-35	**(-31)**	1596	402	468	510	2.42	13.53	3.12	0.79	0.92
-30	**(-22)**	2134	538	625	587	2.75	18.20	3.62	0.91	1.06
-25	**(-13)**	2777	700	814	664	3.10	23.83	4.17	1.05	1.22
-20	**(- 4)**	3527	889	1034	743	3.45	30.50	4.75	1.20	1.39
-15	**(+ 5)**	4390	1106	1286	825	3.81	38.27	5.33	1.34	1.56
-10	**(+14)**	5369	1353	1573	913	4.18	47.22	5.89	1.48	1.73

TEST CONDITIONS:		**EN12900**					(Condensing temperature **55ºC (+131ºF))**			
@220V50Hz		**Fan**								
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	817	206	239	436	2.16	8.12	1.90	0.48	0.56
-35	**(-31)**	1206	304	353	528	2.52	11.98	2.27	0.57	0.66
-30	**(-22)**	1658	418	486	615	2.90	16.55	2.67	0.67	0.78
-25	**(-13)**	2178	549	638	702	3.28	21.91	3.10	0.78	0.91
-20	**(- 4)**	2769	698	811	789	3.68	28.14	3.53	0.89	1.03
-15	**(+ 5)**	3436	866	1007	879	4.08	35.29	3.93	0.99	1.15
-10	**(+14)**	4182	1054	1226	974	4.50	43.45	4.27	1.08	1.25

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		