

### COMPRESSOR DEFINITION

Designation	<b>NT 2180GK</b>
Nominal Voltage/Frequency	<b>220-240 V 50 Hz</b>
Engineering Number	<b>922HA04</b>

### 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 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 pressures/temperature			
9.1 Operating (gauge)	25.7	[kgf/cm <sup>2</sup> ] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm <sup>2</sup> ] (408 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1	[hp]
2 Displacement	20.44	[cm <sup>3</sup> ] (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)	18	[kg] (39.68 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELETRICAL 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	3ARR3B3AV3	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	15(440)	[µF(VAC minimum)]
5 Motor protection	T0743/G9	
6 Start winding resistance	9.24	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.35	[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	IMQ - IRAM - VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			EN12900LBP Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
1828	461	536	502	2.78	14.51	3.64	0.92	1.07

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V50Hz			EN12900 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)	1494	376	438	430	2.45	11.13	3.47	0.87	1.02
-35	(-31)	1973	497	578	488	2.67	14.76	4.06	1.02	1.19
-30	(-22)	2595	654	760	550	2.91	19.49	4.72	1.19	1.38
-25	(-13)	3360	847	985	615	3.18	25.36	5.46	1.38	1.60
-20	(- 4)	4267	1075	1250	682	3.48	32.42	6.25	1.58	1.83
-15	(+ 5)	5317	1340	1558	750	3.79	40.72	7.09	1.79	2.08
-10	(+14)	6510	1641	1908	819	4.11	50.30	7.96	2.01	2.33

TEST CONDITIONS: @220V50Hz			EN12900 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)	1128	284	331	422	2.42	9.50	2.67	0.67	0.78
-35	(-31)	1566	395	459	500	2.70	13.28	3.13	0.79	0.92
-30	(-22)	2114	533	620	578	3.01	18.03	3.66	0.92	1.07
-25	(-13)	2775	699	813	657	3.34	23.80	4.22	1.06	1.24
-20	(- 4)	3546	894	1039	736	3.68	30.64	4.82	1.22	1.41
-15	(+ 5)	4429	1116	1298	814	4.03	38.60	5.45	1.37	1.60
-10	(+14)	5423	1367	1589	890	4.39	47.71	6.09	1.53	1.78

TEST CONDITIONS: @220V50Hz			EN12900 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)	757	191	222	402	2.36	7.50	1.90	0.48	0.56
-35	(-31)	1142	288	335	502	2.73	11.36	2.26	0.57	0.66
-30	(-22)	1608	405	471	600	3.12	16.07	2.67	0.67	0.78
-25	(-13)	2153	543	631	697	3.52	21.68	3.09	0.78	0.91
-20	(- 4)	2778	700	814	791	3.92	28.23	3.53	0.89	1.03
-15	(+ 5)	3484	878	1021	882	4.32	35.77	3.96	1.00	1.16
-10	(+14)	4269	1076	1251	970	4.73	44.35	4.39	1.11	1.29

### 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		