

COMPRESSOR DEFINITION

Designation	NT 2180GKV
Nominal Voltage/Frequency	220-240 V 50 Hz
Engineering Number	923MA04

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 ²] (365 psig)	/ °C - °F
9.2 Peak (gauge)	28.7	[kgf/cm ²] (408 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)	17.4	[kg] (38.36 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	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	T0659/G9	
6 Start winding resistance	8.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.90	[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		

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]
1808	456	530	507	2.42	14.35	3.57	0.90	1.05

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)	1516	382	444	431	2.12	11.30	3.49	0.88	1.02
-35	(-31)	1992	502	584	497	2.38	14.90	4.03	1.01	1.18
-30	(-22)	2605	657	763	560	2.64	19.56	4.67	1.18	1.37
-25	(-13)	3359	847	984	622	2.92	25.35	5.40	1.36	1.58
-20	(- 4)	4258	1073	1248	686	3.20	32.35	6.20	1.56	1.82
-15	(+ 5)	5306	1337	1555	754	3.49	40.64	7.03	1.77	2.06
-10	(+14)	6507	1640	1907	828	3.79	50.27	7.87	1.98	2.31

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)	1158	292	339	435	2.12	9.75	2.67	0.67	0.78
-35	(-31)	1596	402	468	514	2.44	13.53	3.10	0.78	0.91
-30	(-22)	2134	538	625	590	2.76	18.20	3.60	0.91	1.06
-25	(-13)	2777	700	814	666	3.10	23.83	4.16	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	824	3.81	38.27	5.34	1.34	1.56
-10	(+14)	5369	1353	1573	911	4.17	47.22	5.90	1.49	1.73

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)	817	206	239	438	2.16	8.12	1.89	0.48	0.56
-35	(-31)	1206	304	353	528	2.52	11.98	2.26	0.57	0.66
-30	(-22)	1658	418	486	614	2.89	16.55	2.68	0.67	0.78
-25	(-13)	2178	549	638	700	3.28	21.91	3.11	0.78	0.91
-20	(- 4)	2769	698	811	788	3.67	28.14	3.53	0.89	1.04
-15	(+ 5)	3436	866	1007	879	4.08	35.29	3.93	0.99	1.15
-10	(+14)	4182	1054	1226	976	4.50	43.45	4.26	1.07	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		