

COMPRESSOR DEFINITION

Designation	NT 2178GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	922EG02

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	17.39	[cm ³] (1.061 cu.in)
2.1 Bore [mm]	34.120	
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	[kg] (37.48 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	RVA9AD3C-121	
3 Start capacitor	243-292(165)	[µF(VAC minimum)]
4 Run capacitor	35(440)	[µF(VAC minimum)]
5 Motor protection	T0878/C9	
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			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°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]
3585	903	1050	744	7.43	24.30	4.82	1.21	1.41

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V60Hz			ASHRAE32 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)	1664	419	488	433	5.10	11.19	3.83	0.97	1.12
-35	(-31)	2284	575	669	517	5.68	15.40	4.42	1.11	1.30
-30	(-22)	3029	763	888	593	6.24	20.49	5.11	1.29	1.50
-25	(-13)	3901	983	1143	664	6.77	26.50	5.88	1.48	1.72
-20	(- 4)	4899	1235	1436	731	7.30	33.46	6.71	1.69	1.96
-15	(+ 5)	6024	1518	1765	795	7.82	41.39	7.57	1.91	2.22
-10	(+14)	7275	1833	2132	859	8.36	50.33	8.46	2.13	2.48

TEST CONDITIONS: @115V60Hz			ASHRAE32 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)	1390	350	407	419	5.00	9.32	3.33	0.84	0.98
-35	(-31)	2003	505	587	514	5.67	13.48	3.90	0.98	1.14
-30	(-22)	2745	692	804	604	6.33	18.54	4.53	1.14	1.33
-25	(-13)	3616	911	1060	690	7.00	24.52	5.22	1.32	1.53
-20	(- 4)	4617	1163	1353	775	7.68	31.47	5.95	1.50	1.74
-15	(+ 5)	5747	1448	1684	859	8.38	39.41	6.69	1.69	1.96
-10	(+14)	7006	1766	2053	944	9.12	48.37	7.44	1.87	2.18

TEST CONDITIONS: @115V60Hz			ASHRAE32 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)	1177	297	345	414	4.97	7.88	2.84	0.71	0.83
-35	(-31)	1747	440	512	516	5.69	11.74	3.39	0.85	0.99
-30	(-22)	2449	617	718	615	6.42	16.51	3.98	1.00	1.17
-25	(-13)	3284	827	962	713	7.18	22.22	4.61	1.16	1.35
-20	(- 4)	4250	1071	1245	811	7.98	28.91	5.25	1.32	1.54
-15	(+ 5)	5349	1348	1567	910	8.82	36.60	5.88	1.48	1.72
-10	(+14)	6580	1658	1928	1013	9.72	45.34	6.49	1.63	1.90

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		