

### 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	CSIR		
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 <sup>2</sup> ] (358 psig)	/ °C - °F
9.2 Peak	28.3	[kgf/cm <sup>2</sup> ] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1-	[hp]
2 Displacement	17.39	[cm <sup>3</sup> ] (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 <sup>2</sup> ] (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	Current Relay	
2.1 Starting device	3ARR2KCP172S	
3 Start capacitor	243-292(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	GA3RNU0002	
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]
3420	862	1002	830	10.20	23.19	4.12	1.04	1.21

### 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)	1606	405	471	477	8.30	10.79	3.36	0.85	0.98
-35	(-31)	2207	556	647	565	8.72	14.88	3.92	0.99	1.15
-30	(-22)	2961	746	868	648	9.12	20.03	4.58	1.15	1.34
-25	(-13)	3863	973	1132	726	9.53	26.24	5.32	1.34	1.56
-20	(- 4)	4908	1237	1438	800	9.94	33.52	6.13	1.55	1.80
-15	(+ 5)	6092	1535	1785	870	10.39	41.86	7.00	1.76	2.05
-10	(+14)	7410	1867	2171	936	10.87	51.26	7.90	1.99	2.32

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)	1371	346	402	461	8.20	9.20	2.98	0.75	0.87
-35	(-31)	1937	488	568	560	8.68	13.04	3.46	0.87	1.01
-30	(-22)	2646	667	775	658	9.19	17.87	4.02	1.01	1.18
-25	(-13)	3493	880	1024	753	9.73	23.68	4.63	1.17	1.36
-20	(- 4)	4473	1127	1311	847	10.32	30.48	5.28	1.33	1.55
-15	(+ 5)	5580	1406	1635	939	10.97	38.26	5.95	1.50	1.74
-10	(+14)	6811	1716	1996	1030	11.69	47.02	6.63	1.67	1.94

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)	1164	293	341	454	8.19	7.79	2.56	0.64	0.75
-35	(-31)	1688	425	495	563	8.70	11.34	3.00	0.76	0.88
-30	(-22)	2345	591	687	672	9.27	15.81	3.49	0.88	1.02
-25	(-13)	3130	789	917	783	9.91	21.18	4.00	1.01	1.17
-20	(- 4)	4036	1017	1183	894	10.63	27.45	4.52	1.14	1.32
-15	(+ 5)	5060	1275	1483	1007	11.45	34.63	5.03	1.27	1.47
-10	(+14)	6197	1562	1816	1122	12.38	42.70	5.52	1.39	1.62

### 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		