

COMPRESSOR DEFINITION

Designation	NT 2180GK
Nominal Voltage/Frequency	115 V 60 Hz
Engineering Number	922HG02

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 - High 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)	17.5	[kg] (38.58 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	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	CST00GK-3031	
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]
3822	963	1120	948	11.20	25.91	4.03	1.02	1.18

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)	1770	446	519	521	8.57	11.90	3.39	0.86	0.99
-35	(-31)	2472	623	724	629	9.12	16.67	3.94	0.99	1.15
-30	(-22)	3279	826	961	734	9.72	22.19	4.48	1.13	1.31
-25	(-13)	4192	1056	1228	836	10.37	28.48	5.01	1.26	1.47
-20	(- 4)	5210	1313	1527	936	11.09	35.58	5.56	1.40	1.63
-15	(+ 5)	6333	1596	1856	1035	11.90	43.51	6.11	1.54	1.79
-10	(+14)	7563	1906	2216	1134	12.79	52.32	6.68	1.68	1.96

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)	1435	362	420	506	8.44	9.63	2.82	0.71	0.83
-35	(-31)	2136	538	626	629	9.11	14.38	3.39	0.85	0.99
-30	(-22)	2943	742	862	750	9.83	19.88	3.93	0.99	1.15
-25	(-13)	3857	972	1130	870	10.63	26.15	4.44	1.12	1.30
-20	(- 4)	4877	1229	1429	990	11.52	33.24	4.93	1.24	1.44
-15	(+ 5)	6005	1513	1759	1112	12.50	41.17	5.40	1.36	1.58
-10	(+14)	7239	1824	2121	1234	13.58	49.97	5.86	1.48	1.72

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)	1025	258	300	489	8.28	6.86	2.12	0.53	0.62
-35	(-31)	1740	438	510	628	9.06	11.69	2.75	0.69	0.81
-30	(-22)	2562	646	751	767	9.92	17.27	3.33	0.84	0.98
-25	(-13)	3492	880	1023	907	10.87	23.63	3.85	0.97	1.13
-20	(- 4)	4529	1141	1327	1049	11.91	30.80	4.33	1.09	1.27
-15	(+ 5)	5674	1430	1663	1194	13.07	38.83	4.76	1.20	1.39
-10	(+14)	6927	1745	2030	1342	14.34	47.72	5.15	1.30	1.51

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		