

COMPRESSOR DEFINITION

Designation	NT 2180GK
Nominal Voltage/Frequency	115-127 V 60 Hz
Engineering Number	922HE02

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	115-127 / 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 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 1/4	[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)	16.7	[kg] (36.82 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	115-127 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Voltage Relay	
2.1 Starting device	RVA9AD3C-121	
3 Start capacitor	243-292(250)	[µF(VAC minimum)]
4 Run capacitor	35(440)	[µF(VAC minimum)]
5 Motor protection	MRT00AEK-3259	
6 Start winding resistance	2.33	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.49	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	57.00	[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	IMTRO - VDE	

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]
4196	1057	1230	855	7.86	28.45	4.91	1.24	1.44

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)	1786	450	523	464	4.57	12.00	3.83	0.97	1.12
-35	(-31)	2474	623	725	560	5.39	16.68	4.43	1.12	1.30
-30	(-22)	3330	839	976	655	6.20	22.52	5.10	1.28	1.49
-25	(-13)	4352	1097	1275	747	6.99	29.56	5.83	1.47	1.71
-20	(- 4)	5540	1396	1623	839	7.76	37.84	6.61	1.67	1.94
-15	(+ 5)	6894	1737	2020	928	8.52	47.37	7.43	1.87	2.18
-10	(+14)	8413	2120	2465	1015	9.26	58.20	8.27	2.08	2.42

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)	1507	380	442	462	4.58	10.10	3.28	0.83	0.96
-35	(-31)	2187	551	641	569	5.45	14.72	3.84	0.97	1.13
-30	(-22)	3030	764	888	677	6.36	20.46	4.46	1.12	1.31
-25	(-13)	4036	1017	1183	787	7.31	27.37	5.11	1.29	1.50
-20	(- 4)	5203	1311	1525	899	8.30	35.46	5.78	1.46	1.69
-15	(+ 5)	6532	1646	1914	1012	9.32	44.79	6.46	1.63	1.89
-10	(+14)	8021	2021	2350	1127	10.38	55.37	7.14	1.80	2.09

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)	1277	322	374	446	4.42	8.55	2.86	0.72	0.84
-35	(-31)	1890	476	554	561	5.34	12.70	3.37	0.85	0.99
-30	(-22)	2662	671	780	680	6.35	17.94	3.92	0.99	1.15
-25	(-13)	3592	905	1053	804	7.45	24.31	4.47	1.13	1.31
-20	(- 4)	4680	1179	1371	933	8.64	31.83	5.02	1.27	1.47
-15	(+ 5)	5924	1493	1736	1067	9.92	40.54	5.56	1.40	1.63
-10	(+14)	7324	1846	2146	1205	11.29	50.47	6.06	1.53	1.78

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		