COMPRESSOR DEFINITION

Designation	**NT 2178GK**
Nominal Voltage/Frequency	**220-240 V 50 Hz**
Engineering Number	**922EA04**

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	CSIR		
6 Starting torque	HST - Hight starting torque		
7 Expantion device	Capillary tube or Expansion valve		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	-	-	-
8.2 LBP (43ºC Ambient temperature)	-	-	-
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	25.7	[kgf/cm²] (365 psig)	/ ºC - ºF
9.2 Peak (gauge)	28.7	[kgf/cm²] (408 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1-	[hp]
2 Displacement	17.39	[cm³] (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/cm²] (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	Current Relay	
2.1 Starting device	MTRPH55-59	
3 Start capacitor	88-108(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0588/G6	
6 Start winding resistance	10.40	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	2.40	[Ω at 25ºC (77ºF)] +/- 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	IMQ - IRAM	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V50Hz**			**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]
2668	672	782	601	3.83	18.09	4.44	1.12	1.30

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35ºC (+95ºF))**
@220V50Hz **Fan**

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)**	1192	300	349	339	3.05	8.01	3.52	0.89	1.03
-35	**(-31)**	1708	430	500	405	3.23	11.52	4.21	1.06	1.23
-30	**(-22)**	2304	581	675	468	3.42	15.59	4.92	1.24	1.44
-25	**(-13)**	2979	751	873	529	3.60	20.24	5.64	1.42	1.65
-20	**(- 4)**	3733	941	1094	588	3.78	25.49	6.36	1.60	1.86
-15	**(+ 5)**	4566	1151	1338	646	3.96	31.37	7.07	1.78	2.07
-10	**(+14)**	5476	1380	1605	705	4.14	37.89	7.76	1.96	2.27

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45ºC (+113ºF))**
@220V50Hz **Fan**

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)**	996	251	292	324	3.01	6.68	3.08	0.78	0.90
-35	**(-31)**	1474	372	432	402	3.22	9.92	3.67	0.92	1.08
-30	**(-22)**	2043	515	599	477	3.44	13.80	4.28	1.08	1.25
-25	**(-13)**	2702	681	792	551	3.66	18.32	4.90	1.23	1.44
-20	**(- 4)**	3451	870	1011	625	3.91	23.52	5.52	1.39	1.62
-15	**(+ 5)**	4289	1081	1257	699	4.16	29.41	6.14	1.55	1.80
-10	**(+14)**	5216	1314	1528	774	4.42	36.01	6.74	1.70	1.98

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55ºC (+131ºF))**
@220V50Hz **Fan**

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)**	822	207	241	307	2.99	5.50	2.67	0.67	0.78
-35	**(-31)**	1257	317	368	396	3.21	8.45	3.18	0.80	0.93
-30	**(-22)**	1795	452	526	484	3.46	12.10	3.71	0.94	1.09
-25	**(-13)**	2434	613	713	571	3.73	16.47	4.26	1.07	1.25
-20	**(- 4)**	3173	800	930	658	4.03	21.58	4.82	1.21	1.41
-15	**(+ 5)**	4013	1011	1176	747	4.35	27.46	5.37	1.35	1.57
-10	**(+14)**	4952	1248	1451	839	4.70	34.12	5.90	1.49	1.73

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		