

## COMPRESSOR DEFINITION

Designation	<b>NT2178GK</b>
Nominal Voltage/Frequency	<b>220-240 V 50 Hz</b>
Engineering Number	<b>922EA04</b>



## A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R404A		
3 Nominal voltage and frequency	220-240 / 50	[ V / Hz ]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-40°C to -10°C		
5 Motor type	CSIR		
6 Starting torque	HST - High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling	Fan cooled	Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
	-	-	-
	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	24.7	[Bar]	
9.2 Peak (gauge)	27.7	[Bar]	
10 Maximum winding temperature	130	[ °C ]	

## B - MECHANICAL DATA

1 Commercial designation	1-	[hp]
2 Displacement	17.39	[cm³]
2.1 Bore	34.13	[mm]
2.2 Stroke	19.03	[mm]
3 Lubricant charge	450	[ml]
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight(with oil charge)	17	[kg]
5 Nitrogen charge	0.2 to 0.3	[Bar]

## 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 (external)	T0588/G6	
6 Start winding resistance	10.40	[ohm at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.40	[ohm at 25°C (77°F)] +/- 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	

**D - PERFORMANCE - CHECK POINT DATA**

TEST CONDITIONS: <b>@220V50Hz</b>			<b>EN12900LBP</b> <b>Fan cooled</b>		Evap. Temp -35°C Return Gas +20°C Cond. Temp +40°C Liquid Subcooling 0K			
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]
1420	358	416	425	3.22	11.18	3.35	0.85	0.98

**E - PERFORMANCE - CURVES**

TEST CONDITIONS: <b>@220V50Hz</b>			<b>EN12900</b> <b>Fan cooled</b>		Condensing temperature <b>35°C (+95°F)</b>				
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]
<b>-40 (-40)</b>	1103	278	324	346	3.04	8.21	3.17	0.80	0.94
<b>-35 (-31)</b>	1541	388	451	413	3.24	11.53	3.73	0.94	1.09
<b>-30 (-22)</b>	2102	530	615	482	3.45	15.78	4.35	1.10	1.28
<b>-25 (-13)</b>	2783	701	815	552	3.67	21.00	5.03	1.27	1.48
<b>-20 (- 4)</b>	3584	903	1050	623	3.90	27.23	5.75	1.45	1.69
<b>-15 (+ 5)</b>	4506	1135	1321	694	4.14	34.50	6.50	1.64	1.90
<b>-10 (+14)</b>	5547	1398	1626	764	4.39	42.85	7.26	1.83	2.13

TEST CONDITIONS: <b>@220V50Hz</b>			<b>EN12900</b> <b>Fan cooled</b>		Condensing temperature <b>45°C (+113°F)</b>				
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]
<b>-40 (-40)</b>	917	231	273	365	3.04	7.73	2.56	0.64	0.75
<b>-35 (-31)</b>	1264	319	373	432	3.25	10.73	2.96	0.75	0.86
<b>-30 (-22)</b>	1707	430	502	504	3.48	14.56	3.41	0.86	1.00
<b>-25 (-13)</b>	2245	566	659	580	3.74	19.26	3.88	0.98	1.14
<b>-20 (- 4)</b>	2878	725	844	659	4.02	24.87	4.37	1.10	1.28
<b>-15 (+ 5)</b>	3607	909	1057	741	4.33	31.43	4.86	1.22	1.43
<b>-10 (+14)</b>	4429	1116	1297	826	4.65	38.97	5.34	1.35	1.57

TEST CONDITIONS: <b>@220V50Hz</b>			<b>EN12900</b> <b>Fan cooled</b>		Condensing temperature <b>55°C (+131°F)</b>				
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]
<b>-40 (-40)</b>	-	-	-	-	-	-	-	-	-
<b>-35 (-31)</b>	937	236	274	429	3.26	9.33	2.18	0.55	0.64
<b>-30 (-22)</b>	1291	325	378	512	3.52	12.90	2.51	0.63	0.74
<b>-25 (-13)</b>	1714	432	502	603	3.82	17.26	2.84	0.72	0.83
<b>-20 (- 4)</b>	2208	556	647	700	4.15	22.43	3.16	0.80	0.92
<b>-15 (+ 5)</b>	2771	698	812	803	4.53	28.45	3.46	0.87	1.01
<b>-10 (+14)</b>	3402	857	997	912	4.94	35.35	3.72	0.94	1.09

1 Base plate	Universal
2 Tray holder	No
3 Connectors	
3.1 SUCTION	9.6 +0.07/+0.00 [mm]
3.1.1 Material	Copper
3.1.2 Shape	Vertical
3.2 DISCHARGE	6.42 +0.08/+0.00 [mm]
3.2.1 Material	Copper
3.2.2 Shape	Vertical
3.3 PROCESS	9.6 +0.07/+0.00 [mm]
3.3.1 Material	Copper
3.3.2 Shape	Vertical
3.4 Oil cooler	No
3.5 Connector sealing	Rubber Plugs