

COMPRESSOR DEFINITION

Designation	NT 6220Z
Nominal Voltage/Frequency	200-240 V 50 Hz / 230 V 60 Hz
Engineering Number	212CN09

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200-240 / 50	[V / Hz]	
4 Application type	High Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-15°C to 10°C	(5°F to 50°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 temperature			
9.1 Operating	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1	[hp]
2 Displacement	22.37	[cm ³] (1.365 cu.in)
2.1 Bore [mm]	36.990	
2.2 Stroke [mm]	20.830	
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)	16.4	[kg] (36.16 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	200-240 V 50 Hz / 230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRPH-55	
3 Start capacitor	88-108(330)	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	T0901/G6	
6 Start winding resistance	12.16	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.86	[Ω 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	CCC - IMQ	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @230V60Hz			ASHRAEHBP46 Fan		Evaporating temperature (Condensing temperature		7.2°C (44.96°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]
8121	2047	2380	1073	5.61	52.66	7.57	1.91	2.22

E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V50Hz		ASHRAE46 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]
-15	(+5)	3460	872	1014	455	3.55	18.71	7.61	1.92	2.23
-10	(+14)	4344	1095	1273	506	3.73	23.58	8.59	2.16	2.52
-5	(+23)	5434	1369	1592	559	3.93	29.60	9.72	2.45	2.85
0	(+32)	6733	1697	1973	615	4.16	36.84	10.95	2.76	3.21
+5	(+41)	8241	2077	2415	674	4.41	45.33	12.23	3.08	3.58
+10	(+50)	9960	2510	2919	736	4.70	55.14	13.54	3.41	3.97

TEST CONDITIONS: @230V50Hz		ASHRAE46 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]
-15	(+5)	3061	771	897	491	3.67	17.89	6.25	1.57	1.83
-10	(+14)	3794	956	1112	549	3.89	22.25	6.91	1.74	2.03
-5	(+23)	4730	1192	1386	611	4.14	27.84	7.73	1.95	2.27
0	(+32)	5872	1480	1721	677	4.41	34.73	8.67	2.18	2.54
+5	(+41)	7220	1820	2116	747	4.72	42.97	9.66	2.44	2.83
+10	(+50)	8777	2212	2572	822	5.07	52.61	10.68	2.69	3.13

TEST CONDITIONS: @230V50Hz		ASHRAE46 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]
-15	(+5)	2786	702	816	523	3.79	17.74	5.32	1.34	1.56
-10	(+14)	3360	847	984	590	4.05	21.49	5.70	1.44	1.67
-5	(+23)	4134	1042	1211	663	4.35	26.56	6.24	1.57	1.83
0	(+32)	5110	1288	1497	740	4.69	33.01	6.90	1.74	2.02
+5	(+41)	6290	1585	1843	824	5.06	40.89	7.64	1.92	2.24
+10	(+50)	7675	1934	2249	913	5.47	50.26	8.40	2.12	2.46

E - PERFORMANCE - CURVES

TEST CONDITIONS: @230V60Hz		ASHRAE46 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]
-15 (+5)	4201	1059	1231	568	3.63	22.72	7.40	1.86	2.17	
-10 (+14)	5059	1275	1482	643	3.89	27.45	7.89	1.99	2.31	
-5 (+23)	6202	1563	1817	719	4.17	33.78	8.63	2.17	2.53	
0 (+32)	7632	1923	2236	795	4.46	41.76	9.58	2.41	2.81	
+5 (+41)	9348	2356	2739	872	4.77	51.43	10.70	2.70	3.14	
+10 (+50)	11349	2860	3325	949	5.08	62.84	11.98	3.02	3.51	

TEST CONDITIONS: @230V60Hz		ASHRAE46 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]
-15 (+5)	3696	931	1083	597	3.71	21.56	6.18	1.56	1.81	
-10 (+14)	4582	1155	1343	681	4.01	26.88	6.72	1.69	1.97	
-5 (+23)	5670	1429	1662	767	4.34	33.41	7.38	1.86	2.16	
0 (+32)	6960	1754	2039	856	4.68	41.20	8.13	2.05	2.38	
+5 (+41)	8450	2129	2476	946	5.05	50.30	8.94	2.25	2.62	
+10 (+50)	10142	2556	2972	1038	5.44	60.74	9.79	2.47	2.87	

TEST CONDITIONS: @230V60Hz		ASHRAE46 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]
-15 (+5)	3072	774	900	627	3.82	19.60	4.91	1.24	1.44	
-10 (+14)	4007	1010	1174	722	4.17	25.62	5.54	1.40	1.62	
-5 (+23)	5059	1275	1483	820	4.55	32.48	6.17	1.56	1.81	
0 (+32)	6228	1570	1825	922	4.96	40.20	6.78	1.71	1.99	
+5 (+41)	7514	1894	2202	1027	5.40	48.84	7.34	1.85	2.15	
+10 (+50)	8917	2247	2613	1135	5.86	58.44	7.82	1.97	2.29	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal
2 Tray holder	No
3 Connectors	
3.1 SUCTION	12.7 +0.25/-0.25 [mm] (0.500" +0.010"/-0.010")
3.1.1 Material	Steel
3.1.2 Shape	ROTOLOCK(Ex. thr. 1"-14UNS-2A)
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