

COMPRESSOR DEFINITION

Designation	NE K6210GK
Nominal Voltage/Frequency	100 V 50 Hz 60 Hz
Engineering Number	958CQ71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	100 / 50	[V / Hz]	
4 Application type	Medium Back Pressure (Commercial Compressors)		
4.1 Evaporating temperature range	-20°C to 10°C	(-4°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	25.2	[kgf/cm ²] (358 psig)	/ °C - °F
9.2 Peak	28.3	[kgf/cm ²] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	8.77	[cm ³] (0.535 cu.in)
2.1 Bore [mm]	26.497	
2.2 Stroke [mm]	15.920	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	11	[kg] (24.25 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	100 V 50/60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	9660C-475-187	
3 Start capacitor	189-227(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRT00AFZ-3262	
6 Start winding resistance	5.20	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.71	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	38.00	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			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]
4572	1152	1340	676	10.20	37.64	6.76	1.70	1.98

TEST CONDITIONS: @100V60Hz			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]
5401	1361	1583	765	9.53	44.46	7.06	1.78	2.07

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		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]
-20	(- 4)	2127	536	623	417	8.97	13.50	5.10	1.29	1.49
-15	(+ 5)	2650	668	777	443	9.06	16.92	5.98	1.51	1.75
-10	(+14)	3277	826	960	468	9.15	21.05	7.00	1.76	2.05
-5	(+23)	4007	1010	1174	493	9.26	25.93	8.13	2.05	2.38
0	(+32)	4841	1220	1418	517	9.39	31.60	9.36	2.36	2.74
+5	(+41)	5778	1456	1693	540	9.54	38.09	10.69	2.69	3.13
+10	(+50)	6820	1719	1998	562	9.71	45.45	12.10	3.05	3.54

TEST CONDITIONS: @100V50Hz		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]
-20	(- 4)	1800	453	527	438	8.96	12.61	4.11	1.04	1.21
-15	(+ 5)	2265	571	664	471	9.07	15.96	4.81	1.21	1.41
-10	(+14)	2822	711	827	503	9.21	20.03	5.61	1.41	1.64
-5	(+23)	3471	875	1017	534	9.36	24.84	6.50	1.64	1.91
0	(+32)	4213	1062	1234	564	9.55	30.43	7.47	1.88	2.19
+5	(+41)	5047	1272	1479	594	9.76	36.85	8.50	2.14	2.49
+10	(+50)	5973	1505	1750	623	10.01	44.13	9.58	2.42	2.81

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		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]
-20	(- 4)	1481	373	434	450	8.92	11.65	3.29	0.83	0.97
-15	(+ 5)	1872	472	548	492	9.08	14.82	3.81	0.96	1.12
-10	(+14)	2343	590	686	533	9.27	18.69	4.40	1.11	1.29
-5	(+23)	2894	729	848	573	9.50	23.31	5.05	1.27	1.48
0	(+32)	3527	889	1033	613	9.75	28.71	5.75	1.45	1.69
+5	(+41)	4240	1068	1242	652	10.05	34.93	6.49	1.64	1.90
+10	(+50)	5034	1268	1475	690	10.39	42.01	7.26	1.83	2.13

TEST CONDITIONS: @100V60Hz		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]
-20	(- 4)	2623	661	769	391	6.19	16.65	6.71	1.69	1.97
-15	(+ 5)	3200	806	938	428	6.47	20.43	7.48	1.89	2.19
-10	(+14)	3897	982	1142	467	6.80	25.03	8.34	2.10	2.44
-5	(+23)	4714	1188	1381	509	7.15	30.50	9.26	2.33	2.71
0	(+32)	5651	1424	1656	554	7.55	36.88	10.20	2.57	2.99
+5	(+41)	6708	1690	1966	601	7.98	44.22	11.15	2.81	3.27
+10	(+50)	7885	1987	2310	651	8.44	52.55	12.07	3.04	3.54

TEST CONDITIONS: @100V60Hz		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]
-20	(- 4)	2131	537	624	421	6.43	14.93	5.07	1.28	1.49
-15	(+ 5)	2665	672	781	466	6.79	18.78	5.72	1.44	1.68
-10	(+14)	3305	833	969	512	7.18	23.46	6.44	1.62	1.89
-5	(+23)	4053	1021	1188	561	7.60	29.00	7.22	1.82	2.12
0	(+32)	4907	1237	1438	611	8.05	35.45	8.03	2.02	2.35
+5	(+41)	5869	1479	1720	664	8.54	42.85	8.84	2.23	2.59
+10	(+50)	6937	1748	2033	719	9.06	51.25	9.61	2.42	2.82

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		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]
-20	(- 4)	1822	459	534	440	6.55	14.33	4.14	1.04	1.21
-15	(+ 5)	2268	572	665	494	7.01	17.96	4.59	1.16	1.34
-10	(+14)	2808	708	823	550	7.50	22.41	5.10	1.29	1.50
-5	(+23)	3442	867	1009	607	8.02	27.72	5.68	1.43	1.66
0	(+32)	4170	1051	1222	665	8.57	33.94	6.27	1.58	1.84
+5	(+41)	4992	1258	1463	724	9.15	41.12	6.86	1.73	2.01
+10	(+50)	5908	1489	1731	785	9.75	49.28	7.42	1.87	2.17

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.1 +0.10/+0.00	[mm]	(0.319" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42°		
3.2 DISCHARGE	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.45 +0.10/+0.00	[mm]	(0.254" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 42°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		