

COMPRESSOR DEFINITION

Designation	NE K6170Z
Nominal Voltage/Frequency	100 V 50 Hz 60 Hz
Engineering Number	267DQ71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	100 / 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 pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4+	[hp]
2 Displacement	8.39	[cm ³] (0.512 cu.in)
2.1 Bore [mm]	24.282	
2.2 Stroke [mm]	18.120	
3 Lubricant charge	340	[ml] (11.50 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	10.4	[kg] (22.93 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	9660D-3027-180	
3 Start capacitor	189-227(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0060/G9	
6 Start winding resistance	5.75	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.93	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[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]	
2810	708	823	378	6.65	18.22	7.43	1.87	2.18	

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]	
3274	825	959	408	5.60	21.23	8.02	2.02	2.35	

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]
-15	(+ 5)	1442	363	423	257	6.26	7.80	5.61	1.41	1.64
-10	(+14)	1558	393	457	266	6.25	8.46	5.87	1.48	1.72
-5	(+23)	1870	471	548	278	6.27	10.19	6.73	1.70	1.97
0	(+32)	2376	599	696	294	6.32	13.00	8.10	2.04	2.37
+5	(+41)	3072	774	900	312	6.39	16.90	9.85	2.48	2.89
+10	(+50)	3955	997	1159	333	6.49	21.90	11.88	2.99	3.48

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]
-15	(+ 5)	1257	317	368	268	6.22	7.35	4.71	1.19	1.38
-10	(+14)	1369	345	401	280	6.23	8.02	4.89	1.23	1.43
-5	(+23)	1659	418	486	296	6.28	9.77	5.60	1.41	1.64
0	(+32)	2127	536	623	316	6.36	12.59	6.72	1.69	1.97
+5	(+41)	2770	698	812	340	6.48	16.49	8.15	2.05	2.39
+10	(+50)	3584	903	1050	368	6.63	21.47	9.77	2.46	2.86

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]
-15 (+5)	1083	273	317	276	6.21	6.90	3.93	0.99	1.15	
-10 (+14)	1188	299	348	290	6.25	7.60	4.09	1.03	1.20	
-5 (+23)	1456	367	427	310	6.32	9.35	4.69	1.18	1.38	
0 (+32)	1884	475	552	335	6.43	12.17	5.63	1.42	1.65	
+5 (+41)	2471	623	724	365	6.58	16.07	6.77	1.71	1.99	
+10 (+50)	3214	810	942	400	6.77	21.05	8.03	2.02	2.35	

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]
-15 (+5)	1677	423	492	241	4.29	9.06	6.96	1.75	2.04	
-10 (+14)	1880	474	551	254	4.36	10.21	7.41	1.87	2.17	
-5 (+23)	2265	571	664	272	4.47	12.34	8.33	2.10	2.44	
0 (+32)	2854	719	836	296	4.64	15.61	9.64	2.43	2.82	
+5 (+41)	3668	924	1075	325	4.87	20.17	11.26	2.84	3.30	
+10 (+50)	4728	1191	1385	361	5.14	26.18	13.11	3.30	3.84	

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]
-15 (+5)	1500	378	439	257	4.39	8.77	5.85	1.47	1.71	
-10 (+14)	1662	419	487	272	4.47	9.75	6.11	1.54	1.79	
-5 (+23)	1992	502	584	294	4.62	11.72	6.79	1.71	1.99	
0 (+32)	2510	633	736	322	4.83	14.85	7.80	1.97	2.29	
+5 (+41)	3239	816	949	357	5.11	19.28	9.08	2.29	2.66	
+10 (+50)	4199	1058	1230	399	5.45	25.16	10.54	2.65	3.09	

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]
-15 (+5)	1293	326	379	266	4.45	8.24	4.87	1.23	1.43	
-10 (+14)	1440	363	422	285	4.56	9.20	5.04	1.27	1.48	
-5 (+23)	1739	438	510	312	4.75	11.17	5.58	1.41	1.63	
0 (+32)	2213	558	648	346	5.01	14.30	6.40	1.61	1.88	
+5 (+41)	2881	726	844	388	5.36	18.74	7.44	1.87	2.18	
+10 (+50)	3767	949	1104	438	5.79	24.66	8.60	2.17	2.52	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.03 +0.07/+0.00	[mm]	(0.316" +0.003"/+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		