

COMPRESSOR DEFINITION

Designation	NE K6170Z
Nominal Voltage/Frequency	100 V 50 Hz 60 Hz
Engineering Number	267AQ71

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 - Hight 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	1/4+	[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	350	[ml] (11.84 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	-	[kgf/cm ²]

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	MTRPH-0019	
3 Start capacitor	145-174(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRA6981-3265	
6 Start winding resistance	6.14	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.24	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	26.00/26.00	[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)	5.40/5.40	[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]
2788	703	817	362	5.16	18.08	7.69	1.94	2.25

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]
3236	815	948	428	5.19	20.98	7.56	1.91	2.22

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)	1334	336	391	218	4.26	7.21	6.11	1.54	1.79
-10 (+14)	1681	424	493	236	4.35	9.12	7.14	1.80	2.09
-5 (+23)	2108	531	618	253	4.44	11.48	8.34	2.10	2.44
0 (+32)	2614	659	766	270	4.54	14.30	9.68	2.44	2.84
+5 (+41)	3199	806	937	287	4.64	17.60	11.14	2.81	3.27
+10 (+50)	3862	973	1132	304	4.73	21.38	12.71	3.20	3.73

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)	1195	301	350	233	4.34	6.98	5.13	1.29	1.50
-10 (+14)	1514	382	444	255	4.43	8.88	5.95	1.50	1.74
-5 (+23)	1906	480	558	276	4.55	11.22	6.90	1.74	2.02
0 (+32)	2369	597	694	297	4.68	14.02	7.97	2.01	2.33
+5 (+41)	2903	731	851	318	4.82	17.28	9.13	2.30	2.67
+10 (+50)	3508	884	1028	339	4.97	21.02	10.36	2.61	3.04

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]
-15	(+ 5)	1023	258	300	244	4.39	6.52	4.18	1.05	1.23
-10	(+14)	1306	329	383	271	4.50	8.36	4.81	1.21	1.41
-5	(+23)	1654	417	485	298	4.65	10.62	5.54	1.40	1.62
0	(+32)	2064	520	605	325	4.82	13.33	6.36	1.60	1.86
+5	(+41)	2539	640	744	351	5.01	16.51	7.24	1.82	2.12
+10	(+50)	3077	775	902	377	5.22	20.15	8.16	2.06	2.39

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]
-15	(+ 5)	1601	403	469	233	3.50	8.66	6.85	1.72	2.01
-10	(+14)	2022	510	593	259	3.69	10.98	7.80	1.96	2.28
-5	(+23)	2513	633	736	285	3.89	13.69	8.81	2.22	2.58
0	(+32)	3084	777	904	312	4.12	16.87	9.90	2.50	2.90
+5	(+41)	3745	944	1098	338	4.35	20.60	11.08	2.79	3.25
+10	(+50)	4509	1136	1321	365	4.59	24.97	12.35	3.11	3.62

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]
-15	(+ 5)	1383	348	405	250	3.63	8.08	5.56	1.40	1.63
-10	(+14)	1759	443	515	280	3.85	10.31	6.30	1.59	1.85
-5	(+23)	2204	555	646	310	4.10	12.97	7.12	1.79	2.09
0	(+32)	2729	688	800	341	4.37	16.14	8.00	2.02	2.34
+5	(+41)	3343	843	980	372	4.66	19.90	8.97	2.26	2.63
+10	(+50)	4059	1023	1189	405	4.97	24.33	10.03	2.53	2.94

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]
-15	(+ 5)	1222	308	358	263	3.73	7.78	4.64	1.17	1.36
-10	(+14)	1539	388	451	298	3.99	9.84	5.17	1.30	1.51
-5	(+23)	1923	485	564	334	4.29	12.36	5.77	1.45	1.69
0	(+32)	2387	601	699	371	4.61	15.43	6.43	1.62	1.89
+5	(+41)	2939	741	861	409	4.96	19.11	7.18	1.81	2.10
+10	(+50)	3592	905	1052	448	5.34	23.51	8.02	2.02	2.35

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		