

### COMPRESSOR DEFINITION

Designation	NE K6170Z
Nominal Voltage/Frequency	200-230 V 50 Hz / 208-230 V 60 Hz
Engineering Number	268DB92

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	200-230 / 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 <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	8.39	[cm <sup>3</sup> ] (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)	10.8	[kg] (23.81 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	200-230 V 50 Hz / 208-230 V 60 Hz 1 ~ (Single phase)	
2 Starting device type	Current Relay	
2.1 Starting device	MTRP-49	
3 Start capacitor	53-64(330)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	T0169/G6	
6 Start winding resistance	23.70	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	4.55	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50 Hz)	18.00	[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	UL - VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @208V60Hz			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]
3349	844	981	412	2.42	21.71	8.13	2.05	2.38

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @208V50Hz		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)	1416	357	415	202	1.94	7.66	7.01	1.77	2.05
-10	(+14)	1767	445	518	219	1.98	9.59	8.07	2.03	2.36
-5	(+23)	2206	556	647	236	2.03	12.02	9.36	2.36	2.74
0	(+32)	2734	689	801	252	2.08	14.96	10.84	2.73	3.18
+5	(+41)	3351	844	982	268	2.13	18.44	12.50	3.15	3.66
+10	(+50)	4057	1022	1189	284	2.18	22.46	14.29	3.60	4.19

TEST CONDITIONS: @208V50Hz		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)	1248	314	366	216	1.96	7.29	5.77	1.46	1.69
-10	(+14)	1565	394	459	238	2.02	9.18	6.57	1.66	1.93
-5	(+23)	1962	494	575	260	2.09	11.55	7.55	1.90	2.21
0	(+32)	2438	614	715	280	2.16	14.43	8.69	2.19	2.55
+5	(+41)	2995	755	878	301	2.23	17.83	9.95	2.51	2.92
+10	(+50)	3632	915	1064	321	2.30	21.76	11.31	2.85	3.31

TEST CONDITIONS: @208V50Hz		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)	1076	271	315	226	1.99	6.85	4.76	1.20	1.40
-10	(+14)	1359	342	398	253	2.07	8.69	5.37	1.35	1.57
-5	(+23)	1713	432	502	280	2.16	11.01	6.13	1.54	1.80
0	(+32)	2139	539	627	306	2.25	13.81	6.99	1.76	2.05
+5	(+41)	2635	664	772	332	2.34	17.13	7.94	2.00	2.33
+10	(+50)	3203	807	938	358	2.44	20.97	8.94	2.25	2.62

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @208V60Hz		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)	1671	421	489	231	1.68	9.04	7.21	1.82	2.11	
-10 (+14)	2091	527	613	254	1.77	11.35	8.23	2.07	2.41	
-5 (+23)	2607	657	764	278	1.86	14.20	9.37	2.36	2.75	
0 (+32)	3218	811	943	304	1.96	17.60	10.60	2.67	3.11	
+5 (+41)	3923	989	1150	330	2.07	21.58	11.89	3.00	3.48	
+10 (+50)	4724	1191	1384	357	2.17	26.16	13.21	3.33	3.87	

TEST CONDITIONS: @208V60Hz		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)	1462	368	428	247	1.72	8.54	5.92	1.49	1.73	
-10 (+14)	1840	464	539	275	1.84	10.79	6.68	1.68	1.96	
-5 (+23)	2307	581	676	304	1.95	13.58	7.58	1.91	2.22	
0 (+32)	2862	721	839	334	2.07	16.93	8.57	2.16	2.51	
+5 (+41)	3506	884	1027	364	2.20	20.87	9.64	2.43	2.82	
+10 (+50)	4239	1068	1242	394	2.33	25.40	10.75	2.71	3.15	

TEST CONDITIONS: @208V60Hz		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)	1295	326	380	257	1.79	8.25	5.03	1.27	1.48	
-10 (+14)	1611	406	472	292	1.92	10.30	5.51	1.39	1.62	
-5 (+23)	2008	506	588	327	2.06	12.90	6.13	1.54	1.80	
0 (+32)	2488	627	729	363	2.20	16.07	6.86	1.73	2.01	
+5 (+41)	3050	769	894	398	2.35	19.83	7.67	1.93	2.25	
+10 (+50)	3695	931	1083	433	2.51	24.20	8.53	2.15	2.50	

### 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		