

COMPRESSOR DEFINITION

Designation	NE K2125GK
Nominal Voltage/Frequency	100 V 50 Hz 60 Hz
Engineering Number	959CQ71

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	Low Back Pressure R404A		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°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	1/3	[hp]
2 Displacement	6.20	[cm ³] (0.378 cu.in)
2.1 Bore [mm]	20.873	
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)	11.2	[kg] (24.69 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	MTRPH-0018	
3 Start capacitor	189-227(165)	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MRA38112-3266	
6 Start winding resistance	3.82	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	0.94	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	32.00	[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	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V50Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°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]
1143	288	335	295	5.34	7.75	3.87	0.98	1.13

TEST CONDITIONS: @100V60Hz			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°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]
1362	343	399	319	4.69	9.23	4.27	1.08	1.25

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		ASHRAE32 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]
-40	(-40)	542	136	159	200	5.04	3.64	2.70	0.68	0.79
-35	(-31)	709	179	208	221	5.11	4.78	3.22	0.81	0.94
-30	(-22)	925	233	271	241	5.19	6.26	3.84	0.97	1.13
-25	(-13)	1189	300	348	261	5.27	8.08	4.55	1.15	1.33
-20	(- 4)	1501	378	440	281	5.35	10.25	5.34	1.35	1.56
-15	(+ 5)	1861	469	545	300	5.45	12.79	6.20	1.56	1.82
-10	(+14)	2270	572	665	319	5.55	15.70	7.12	1.79	2.09

TEST CONDITIONS: @100V50Hz		ASHRAE32 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]
-40	(-40)	489	123	143	200	5.05	3.28	2.45	0.62	0.72
-35	(-31)	657	166	193	224	5.12	4.42	2.93	0.74	0.86
-30	(-22)	870	219	255	249	5.20	5.87	3.49	0.88	1.02
-25	(-13)	1127	284	330	274	5.30	7.64	4.10	1.03	1.20
-20	(- 4)	1428	360	419	299	5.42	9.74	4.77	1.20	1.40
-15	(+ 5)	1775	447	520	324	5.55	12.17	5.48	1.38	1.61
-10	(+14)	2167	546	635	348	5.70	14.96	6.22	1.57	1.82

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V50Hz		ASHRAE32 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]
-40	(-40)	415	105	122	195	5.07	2.78	2.13	0.54	0.62
-35	(-31)	584	147	171	224	5.13	3.93	2.61	0.66	0.76
-30	(-22)	795	200	233	254	5.22	5.36	3.13	0.79	0.92
-25	(-13)	1047	264	307	284	5.33	7.09	3.69	0.93	1.08
-20	(- 4)	1341	338	393	314	5.47	9.12	4.27	1.08	1.25
-15	(+ 5)	1676	422	491	345	5.64	11.47	4.87	1.23	1.43
-10	(+14)	2053	517	601	375	5.84	14.14	5.47	1.38	1.60

TEST CONDITIONS: @100V60Hz		ASHRAE32 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]
-40	(-40)	651	164	191	196	3.87	4.37	3.31	0.83	0.97
-35	(-31)	856	216	251	224	4.02	5.77	3.82	0.96	1.12
-30	(-22)	1116	281	327	252	4.20	7.55	4.43	1.12	1.30
-25	(-13)	1432	361	420	280	4.39	9.73	5.11	1.29	1.50
-20	(- 4)	1803	454	528	308	4.60	12.31	5.86	1.48	1.72
-15	(+ 5)	2229	562	653	336	4.83	15.32	6.64	1.67	1.95
-10	(+14)	2711	683	794	364	5.07	18.75	7.44	1.88	2.18

TEST CONDITIONS: @100V60Hz		ASHRAE32 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]
-40	(-40)	586	148	172	196	3.85	3.93	2.99	0.75	0.88
-35	(-31)	788	199	231	228	4.04	5.30	3.46	0.87	1.01
-30	(-22)	1042	263	305	261	4.26	7.04	3.99	1.01	1.17
-25	(-13)	1348	340	395	294	4.51	9.14	4.58	1.15	1.34
-20	(- 4)	1705	430	500	327	4.78	11.62	5.20	1.31	1.52
-15	(+ 5)	2114	533	619	362	5.08	14.50	5.84	1.47	1.71
-10	(+14)	2575	649	754	397	5.41	17.78	6.49	1.64	1.90

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V60Hz		ASHRAE32 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]
-40	(-40)	533	134	156	196	3.89	3.56	2.71	0.68	0.80
-35	(-31)	724	182	212	231	4.07	4.86	3.13	0.79	0.92
-30	(-22)	963	243	282	268	4.31	6.49	3.59	0.91	1.05
-25	(-13)	1251	315	367	306	4.58	8.46	4.09	1.03	1.20
-20	(- 4)	1587	400	465	345	4.89	10.79	4.60	1.16	1.35
-15	(+ 5)	1971	497	577	386	5.23	13.48	5.11	1.29	1.50
-10	(+14)	2403	605	704	428	5.61	16.56	5.61	1.41	1.64

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		