

COMPRESSOR DEFINITION

Designation	VNE K609GK
Nominal Voltage/Frequency	100-300 V 33-75 Hz
Engineering Number	950AX71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-404A		
3 Nominal voltage and frequency	100-300 / 33-75	[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	BPM		
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		[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	500	[ml] (16.91 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	11.6	[kg] (25.57 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	100-300 V 33-75 Hz 3 ~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	VCCHP2456XXXXX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	MST26AKK-3166	
6 Start winding resistance	3.82	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	2.53	[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	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V2000RPM			EN12900MBP_HH Fan		Evaporating temperature (Condensing temperature		-10°C (14°F) 45°C (113°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]	
1822	459	534	292	1.36	14.67	6.24	1.57	1.83	

TEST CONDITIONS: @220V2400RPM			EN12900MBP_HH Fan		Evaporating temperature (Condensing temperature		-10°C (14°F) 45°C (113°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]	
2142	540	628	340	1.57	17.25	6.30	1.59	1.85	

TEST CONDITIONS: @220V3000RPM			EN12900MBP_HH Fan		Evaporating temperature (Condensing temperature		-10°C (14°F) 45°C (113°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]	
2628	662	770	427	1.97	21.17	6.15	1.55	1.80	

TEST CONDITIONS: @220V4500RPM			EN12900MBP_HH Fan		Evaporating temperature (Condensing temperature		-10°C (14°F) 45°C (113°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]	
3699	932	1084	659	3.02	29.79	5.61	1.41	1.64	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2000RPM		EN12900HH 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]
-20	(- 4)	1423	358	417	221	1.04	10.03	6.43	1.62	1.88
-15	(+ 5)	1772	447	519	243	1.13	12.57	7.30	1.84	2.14
-10	(+14)	2193	553	642	262	1.21	15.66	8.37	2.11	2.45
-5	(+23)	2684	676	787	279	1.29	19.34	9.64	2.43	2.82
0	(+32)	3247	818	952	292	1.36	23.63	11.11	2.80	3.25
+5	(+41)	3882	978	1138	303	1.43	28.57	12.76	3.22	3.74
+10	(+50)	4588	1156	1345	312	1.48	34.20	14.61	3.68	4.28

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2000RPM		EN12900HH 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)	1175	296	344	239	1.10	9.32	4.93	1.24	1.45
-15	(+ 5)	1476	372	432	265	1.23	11.79	5.56	1.40	1.63
-10	(+14)	1837	463	538	290	1.36	14.79	6.32	1.59	1.85
-5	(+23)	2258	569	662	312	1.48	18.36	7.22	1.82	2.12
0	(+32)	2739	690	803	333	1.59	22.53	8.25	2.08	2.42
+5	(+41)	3281	827	961	351	1.70	27.33	9.39	2.37	2.75
+10	(+50)	3883	979	1138	366	1.79	32.79	10.66	2.69	3.12

TEST CONDITIONS: @220V2000RPM		EN12900HH 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)	929	234	272	254	1.19	8.55	3.65	0.92	1.07
-15	(+ 5)	1178	297	345	287	1.34	10.92	4.12	1.04	1.21
-10	(+14)	1476	372	433	317	1.48	13.82	4.66	1.17	1.37
-5	(+23)	1823	459	534	346	1.61	17.26	5.27	1.33	1.54
0	(+32)	2220	559	650	373	1.73	21.28	5.94	1.50	1.74
+5	(+41)	2665	672	781	399	1.85	25.93	6.67	1.68	1.95
+10	(+50)	3160	796	926	422	1.95	31.22	7.45	1.88	2.18

TEST CONDITIONS: @220V2400RPM		EN12900HH 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)	1685	425	494	260	1.21	11.88	6.47	1.63	1.90
-15	(+ 5)	2069	521	606	285	1.33	14.68	7.26	1.83	2.13
-10	(+14)	2542	641	745	307	1.43	18.16	8.27	2.09	2.42
-5	(+23)	3103	782	909	327	1.52	22.36	9.49	2.39	2.78
0	(+32)	3752	946	1099	344	1.59	27.31	10.89	2.75	3.19
+5	(+41)	4489	1131	1315	358	1.66	33.05	12.47	3.14	3.65
+10	(+50)	5313	1339	1557	370	1.72	39.61	14.20	3.58	4.16

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2400RPM		EN12900HH 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)	1373	346	402	276	1.29	10.89	4.98	1.26	1.46
-15	(+ 5)	1717	433	503	307	1.43	13.72	5.58	1.41	1.63
-10	(+14)	2135	538	626	337	1.56	17.20	6.31	1.59	1.85
-5	(+23)	2628	662	770	366	1.68	21.37	7.18	1.81	2.10
0	(+32)	3194	805	936	392	1.80	26.27	8.16	2.06	2.39
+5	(+41)	3833	966	1123	417	1.91	31.93	9.23	2.33	2.71
+10	(+50)	4545	1145	1332	440	2.01	38.38	10.39	2.62	3.04

TEST CONDITIONS: @220V2400RPM		EN12900HH 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)	1107	279	324	293	1.35	10.18	3.76	0.95	1.10
-15	(+ 5)	1391	350	408	330	1.53	12.89	4.22	1.06	1.24
-10	(+14)	1734	437	508	366	1.69	16.23	4.75	1.20	1.39
-5	(+23)	2137	539	626	402	1.85	20.23	5.33	1.34	1.56
0	(+32)	2599	655	762	436	2.01	24.92	5.95	1.50	1.74
+5	(+41)	3120	786	914	470	2.17	30.36	6.58	1.66	1.93
+10	(+50)	3699	932	1084	504	2.32	36.56	7.23	1.82	2.12

TEST CONDITIONS: @220V3000RPM		EN12900HH 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)	2026	510	594	326	1.51	14.27	6.22	1.57	1.82
-15	(+ 5)	2526	637	740	358	1.65	17.92	7.06	1.78	2.07
-10	(+14)	3122	787	915	389	1.79	22.30	8.02	2.02	2.35
-5	(+23)	3812	961	1117	420	1.93	27.46	9.08	2.29	2.66
0	(+32)	4598	1159	1347	450	2.07	33.46	10.22	2.58	2.99
+5	(+41)	5479	1381	1606	478	2.21	40.33	11.44	2.88	3.35
+10	(+50)	6457	1627	1892	505	2.34	48.13	12.71	3.20	3.72

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3000RPM		EN12900HH 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)	1678	423	492	345	1.59	13.32	4.86	1.22	1.42
-15	(+ 5)	2105	531	617	385	1.77	16.82	5.47	1.38	1.60
-10	(+14)	2618	660	767	423	1.95	21.08	6.18	1.56	1.81
-5	(+23)	3215	810	942	461	2.12	26.14	6.98	1.76	2.05
0	(+32)	3899	983	1142	497	2.29	32.07	7.85	1.98	2.30
+5	(+41)	4668	1176	1368	531	2.45	38.90	8.79	2.21	2.57
+10	(+50)	5524	1392	1619	564	2.60	46.69	9.77	2.46	2.86

TEST CONDITIONS: @220V3000RPM		EN12900HH 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)	1340	338	393	359	1.66	12.32	3.74	0.94	1.09
-15	(+ 5)	1686	425	494	407	1.88	15.63	4.14	1.04	1.21
-10	(+14)	2108	531	618	455	2.09	19.73	4.63	1.17	1.36
-5	(+23)	2605	656	763	501	2.30	24.66	5.20	1.31	1.53
0	(+32)	3179	801	931	545	2.49	30.48	5.84	1.47	1.71
+5	(+41)	3829	965	1122	587	2.67	37.23	6.52	1.64	1.91
+10	(+50)	4555	1148	1335	627	2.84	44.96	7.23	1.82	2.12

TEST CONDITIONS: @220V3600RPM		EN12900HH 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)	2355	593	690	397	1.82	16.60	5.93	1.50	1.74
-15	(+ 5)	2938	740	861	437	2.01	20.84	6.72	1.69	1.97
-10	(+14)	3641	917	1067	479	2.20	26.01	7.60	1.91	2.23
-5	(+23)	4463	1125	1308	523	2.39	32.16	8.53	2.15	2.50
0	(+32)	5406	1362	1584	568	2.58	39.34	9.52	2.40	2.79
+5	(+41)	6470	1631	1896	614	2.77	47.62	10.54	2.66	3.09
+10	(+50)	7656	1929	2243	662	2.95	57.05	11.58	2.92	3.39

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3600RPM		EN12900HH 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)	1983	500	581	420	1.93	15.73	4.71	1.19	1.38
-15	(+ 5)	2480	625	727	469	2.16	19.81	5.29	1.33	1.55
-10	(+14)	3074	775	901	518	2.38	24.76	5.94	1.50	1.74
-5	(+23)	3766	949	1104	567	2.61	30.63	6.64	1.67	1.95
0	(+32)	4557	1148	1335	617	2.83	37.47	7.38	1.86	2.16
+5	(+41)	5445	1372	1596	667	3.05	45.35	8.15	2.05	2.39
+10	(+50)	6433	1621	1885	717	3.26	54.31	8.91	2.25	2.61

TEST CONDITIONS: @220V3600RPM		EN12900HH 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)	1592	401	467	437	2.01	14.65	3.65	0.92	1.07
-15	(+ 5)	2015	508	590	494	2.27	18.68	4.07	1.03	1.19
-10	(+14)	2513	633	736	552	2.53	23.51	4.55	1.15	1.33
-5	(+23)	3086	778	904	608	2.79	29.21	5.08	1.28	1.49
0	(+32)	3734	941	1094	664	3.04	35.81	5.62	1.42	1.65
+5	(+41)	4459	1124	1307	719	3.29	43.39	6.18	1.56	1.81
+10	(+50)	5261	1326	1541	772	3.53	51.99	6.74	1.70	1.97

TEST CONDITIONS: @220V4500RPM		EN12900HH 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)	2843	716	833	506	2.32	20.04	5.61	1.41	1.64
-15	(+ 5)	3533	890	1035	563	2.57	25.06	6.28	1.58	1.84
-10	(+14)	4349	1096	1274	619	2.83	31.07	7.03	1.77	2.06
-5	(+23)	5291	1333	1550	674	3.10	38.12	7.85	1.98	2.30
0	(+32)	6358	1602	1863	729	3.38	46.27	8.72	2.20	2.55
+5	(+41)	7552	1903	2213	784	3.67	55.60	9.63	2.43	2.82
+10	(+50)	8872	2236	2600	839	3.98	66.14	10.57	2.66	3.10

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4500RPM		EN12900HH 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)	2362	595	692	526	2.41	18.74	4.50	1.13	1.32
-15	(+ 5)	2974	749	871	591	2.70	23.76	5.03	1.27	1.47
-10	(+14)	3690	930	1081	657	3.00	29.72	5.61	1.41	1.64
-5	(+23)	4511	1137	1322	724	3.31	36.69	6.23	1.57	1.83
0	(+32)	5437	1370	1593	791	3.63	44.71	6.88	1.73	2.02
+5	(+41)	6467	1630	1895	858	3.95	53.86	7.54	1.90	2.21
+10	(+50)	7603	1916	2228	927	4.29	64.19	8.21	2.07	2.40

TEST CONDITIONS: @220V4500RPM		EN12900HH 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)	1893	477	555	542	2.48	17.41	3.49	0.88	1.02
-15	(+ 5)	2399	604	703	616	2.82	22.24	3.90	0.98	1.14
-10	(+14)	2987	753	875	690	3.16	27.96	4.33	1.09	1.27
-5	(+23)	3659	922	1072	766	3.51	34.64	4.78	1.20	1.40
0	(+32)	4414	1112	1293	843	3.86	42.33	5.23	1.32	1.53
+5	(+41)	5253	1324	1539	922	4.22	51.10	5.67	1.43	1.66
+10	(+50)	6176	1556	1810	1003	4.58	61.01	6.08	1.53	1.78

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	Slanted parallel to Base Plate		
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		