

### COMPRESSOR DEFINITION

Designation	VNE K212GK
Nominal Voltage/Frequency	100-300 V 33-75 Hz
Engineering Number	950CX71

### 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	Low Back Pressure R404A		
4.1 Evaporating temperature range	-40°C to -10°C	(-40°F to 14°F)	
5 Motor type	BPM		
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	25.2	[kgf/cm <sup>2</sup> ] (358 psig)	/ °C - °F
9.2 Peak	28.3	[kgf/cm <sup>2</sup> ] (402 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	12.11	[cm <sup>3</sup> ] (0.739 cu.in)
2.1 Bore [mm]	27.775	
2.2 Stroke [mm]	20.000	
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 <sup>2</sup> ]

### C - ELETRICAL 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	MST26AHK-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	CCC - VDE	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: <b>@220V2000RPM</b>			<b>ASHRAELBP32 Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F) 54.4°C (129.92°F)</b>	
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]
1507	380	442	332	1.54	10.22	4.54	1.14	1.33

TEST CONDITIONS: <b>@220V2400RPM</b>			<b>ASHRAELBP32 Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F) 54.4°C (129.92°F)</b>	
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]
1755	442	514	379	1.76	11.90	4.63	1.17	1.36

TEST CONDITIONS: <b>@220V3000RPM</b>			<b>ASHRAELBP32 Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F) 54.4°C (129.92°F)</b>	
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]
2136	538	626	463	2.14	14.48	4.61	1.16	1.35

TEST CONDITIONS: <b>@220V3600RPM</b>			<b>ASHRAELBP32 Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F) 54.4°C (129.92°F)</b>	
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]
2495	629	731	558	2.47	16.91	4.47	1.13	1.31

TEST CONDITIONS: <b>@220V4500RPM</b>			<b>ASHRAELBP32 Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F) 54.4°C (129.92°F)</b>	
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]
2934	739	860	681	3.13	19.89	4.31	1.09	1.26

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2000RPM		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)	739	186	217	199	0.90	4.97	3.71	0.93	1.09	
-35 (-31)	991	250	290	230	1.04	6.68	4.32	1.09	1.26	
-30 (-22)	1312	331	384	261	1.18	8.88	5.03	1.27	1.47	
-25 (-13)	1703	429	499	292	1.32	11.57	5.82	1.47	1.71	
-20 (- 4)	2164	545	634	324	1.46	14.78	6.68	1.68	1.96	
-15 (+ 5)	2695	679	790	355	1.61	18.52	7.59	1.91	2.22	
-10 (+14)	3295	830	966	387	1.75	22.80	8.53	2.15	2.50	

TEST CONDITIONS: @220V2000RPM		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)	660	166	193	201	0.91	4.42	3.30	0.83	0.97	
-35 (-31)	898	226	263	237	1.07	6.04	3.79	0.96	1.11	
-30 (-22)	1200	302	352	274	1.24	8.10	4.38	1.10	1.28	
-25 (-13)	1565	394	459	310	1.40	10.61	5.03	1.27	1.48	
-20 (- 4)	1993	502	584	347	1.57	13.58	5.74	1.45	1.68	
-15 (+ 5)	2485	626	728	384	1.74	17.04	6.47	1.63	1.90	
-10 (+14)	3040	766	891	421	1.91	20.99	7.22	1.82	2.11	

TEST CONDITIONS: @220V2000RPM		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)	607	153	178	204	0.92	4.06	2.97	0.75	0.87	
-35 (-31)	831	209	243	245	1.10	5.58	3.39	0.86	0.99	
-30 (-22)	1111	280	326	286	1.28	7.49	3.89	0.98	1.14	
-25 (-13)	1449	365	425	327	1.47	9.80	4.43	1.12	1.30	
-20 (- 4)	1843	464	540	368	1.65	12.54	5.01	1.26	1.47	
-15 (+ 5)	2294	578	672	410	1.84	15.70	5.60	1.41	1.64	
-10 (+14)	2802	706	821	452	2.03	19.31	6.19	1.56	1.81	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2400RPM		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)	819	207	240	222	1.01	5.51	3.68	0.93	1.08	
-35 (-31)	1101	277	323	257	1.16	7.42	4.29	1.08	1.26	
-30 (-22)	1458	367	427	292	1.31	9.86	4.98	1.26	1.46	
-25 (-13)	1890	476	554	328	1.47	12.84	5.76	1.45	1.69	
-20 (- 4)	2397	604	702	364	1.63	16.37	6.59	1.66	1.93	
-15 (+ 5)	2980	751	873	400	1.79	20.48	7.45	1.88	2.18	
-10 (+14)	3638	917	1066	436	1.95	25.17	8.34	2.10	2.44	

TEST CONDITIONS: @220V2400RPM		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)	736	186	216	227	1.02	4.94	3.25	0.82	0.95	
-35 (-31)	1001	252	293	267	1.19	6.74	3.76	0.95	1.10	
-30 (-22)	1341	338	393	308	1.37	9.05	4.35	1.10	1.28	
-25 (-13)	1756	443	515	350	1.56	11.91	5.01	1.26	1.47	
-20 (- 4)	2248	566	659	393	1.76	15.32	5.71	1.44	1.67	
-15 (+ 5)	2814	709	825	438	1.96	19.30	6.44	1.62	1.89	
-10 (+14)	3456	871	1013	482	2.16	23.86	7.17	1.81	2.10	

TEST CONDITIONS: @220V2400RPM		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)	662	167	194	227	1.02	4.43	2.91	0.73	0.85	
-35 (-31)	911	230	267	272	1.21	6.12	3.36	0.85	0.98	
-30 (-22)	1236	311	362	319	1.42	8.33	3.88	0.98	1.14	
-25 (-13)	1636	412	479	368	1.65	11.07	4.45	1.12	1.30	
-20 (- 4)	2112	532	619	418	1.88	14.36	5.05	1.27	1.48	
-15 (+ 5)	2663	671	780	471	2.12	18.23	5.66	1.43	1.66	
-10 (+14)	3291	829	964	525	2.36	22.67	6.27	1.58	1.84	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3000RPM		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)	988	249	289	274	1.21	6.64	3.60	0.91	1.06	
-35 (-31)	1330	335	390	317	1.41	8.97	4.20	1.06	1.23	
-30 (-22)	1765	445	517	362	1.62	11.94	4.88	1.23	1.43	
-25 (-13)	2291	577	671	408	1.83	15.57	5.61	1.41	1.64	
-20 (- 4)	2910	733	853	456	2.05	19.87	6.39	1.61	1.87	
-15 (+ 5)	3621	912	1061	504	2.26	24.88	7.19	1.81	2.11	
-10 (+14)	4424	1115	1296	553	2.49	30.60	8.00	2.02	2.34	

TEST CONDITIONS: @220V3000RPM		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)	897	226	263	277	1.23	6.02	3.24	0.82	0.95	
-35 (-31)	1218	307	357	325	1.45	8.20	3.75	0.94	1.10	
-30 (-22)	1630	411	478	377	1.69	11.01	4.33	1.09	1.27	
-25 (-13)	2135	538	626	430	1.93	14.47	4.96	1.25	1.45	
-20 (- 4)	2731	688	800	485	2.18	18.61	5.63	1.42	1.65	
-15 (+ 5)	3420	862	1002	542	2.44	23.45	6.32	1.59	1.85	
-10 (+14)	4201	1059	1231	600	2.70	29.00	7.00	1.76	2.05	

TEST CONDITIONS: @220V3000RPM		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)	808	204	237	277	1.22	5.41	2.92	0.74	0.85	
-35 (-31)	1113	281	326	332	1.47	7.48	3.36	0.85	0.99	
-30 (-22)	1510	380	442	390	1.74	10.18	3.87	0.98	1.13	
-25 (-13)	1998	504	586	451	2.01	13.52	4.43	1.12	1.30	
-20 (- 4)	2579	650	756	514	2.30	17.54	5.01	1.26	1.47	
-15 (+ 5)	3251	819	953	580	2.61	22.25	5.61	1.41	1.64	
-10 (+14)	4016	1012	1177	648	2.92	27.67	6.19	1.56	1.81	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3600RPM		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)	1142	288	335	327	1.46	7.67	3.49	0.88	1.02	
-35 (-31)	1521	383	446	378	1.70	10.26	4.04	1.02	1.18	
-30 (-22)	2013	507	590	432	1.94	13.62	4.67	1.18	1.37	
-25 (-13)	2619	660	767	489	2.20	17.79	5.36	1.35	1.57	
-20 (- 4)	3338	841	978	548	2.47	22.79	6.09	1.53	1.78	
-15 (+ 5)	4170	1051	1222	609	2.75	28.65	6.85	1.73	2.01	
-10 (+14)	5116	1289	1499	672	3.04	35.39	7.61	1.92	2.23	

TEST CONDITIONS: @220V3600RPM		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)	1019	257	299	329	1.48	6.83	3.11	0.78	0.91	
-35 (-31)	1393	351	408	388	1.74	9.37	3.60	0.91	1.05	
-30 (-22)	1877	473	550	450	2.01	12.67	4.16	1.05	1.22	
-25 (-13)	2471	623	724	515	2.31	16.75	4.78	1.20	1.40	
-20 (- 4)	3175	800	930	584	2.62	21.64	5.43	1.37	1.59	
-15 (+ 5)	3989	1005	1169	654	2.95	27.35	6.10	1.54	1.79	
-10 (+14)	4914	1238	1440	727	3.29	33.92	6.76	1.70	1.98	

TEST CONDITIONS: @220V3600RPM		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)	948	239	278	329	1.47	6.35	2.88	0.72	0.84	
-35 (-31)	1299	327	381	395	1.74	8.73	3.30	0.83	0.97	
-30 (-22)	1757	443	515	464	2.05	11.84	3.78	0.95	1.11	
-25 (-13)	2322	585	680	538	2.37	15.71	4.32	1.09	1.26	
-20 (- 4)	2993	754	877	615	2.73	20.36	4.88	1.23	1.43	
-15 (+ 5)	3772	951	1105	694	3.11	25.81	5.44	1.37	1.59	
-10 (+14)	4658	1174	1365	776	3.51	32.09	6.00	1.51	1.76	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4500RPM		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)	1317	332	386	396	1.76	8.86	3.32	0.84	0.97	
-35 (-31)	1782	449	522	467	2.08	12.01	3.82	0.96	1.12	
-30 (-22)	2378	599	697	541	2.42	16.09	4.39	1.11	1.29	
-25 (-13)	3107	783	910	619	2.78	21.11	5.02	1.26	1.47	
-20 (- 4)	3968	1000	1163	700	3.15	27.10	5.67	1.43	1.66	
-15 (+ 5)	4961	1250	1454	783	3.54	34.09	6.34	1.60	1.86	
-10 (+14)	6086	1534	1783	868	3.94	42.10	7.01	1.77	2.05	

TEST CONDITIONS: @220V4500RPM		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)	1171	295	343	396	1.78	7.86	2.96	0.75	0.87	
-35 (-31)	1624	409	476	474	2.12	10.93	3.43	0.87	1.01	
-30 (-22)	2206	556	646	556	2.49	14.89	3.96	1.00	1.16	
-25 (-13)	2917	735	855	642	2.88	19.78	4.53	1.14	1.33	
-20 (- 4)	3757	947	1101	733	3.29	25.61	5.13	1.29	1.50	
-15 (+ 5)	4727	1191	1385	827	3.72	32.41	5.72	1.44	1.68	
-10 (+14)	5826	1468	1707	925	4.17	40.22	6.30	1.59	1.85	

TEST CONDITIONS: @220V4500RPM		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)	1066	269	312	396	1.76	7.14	2.69	0.68	0.79	
-35 (-31)	1498	378	439	479	2.14	10.06	3.13	0.79	0.92	
-30 (-22)	2057	518	603	569	2.55	13.86	3.61	0.91	1.06	
-25 (-13)	2742	691	803	664	2.99	18.55	4.13	1.04	1.21	
-20 (- 4)	3553	895	1041	764	3.45	24.17	4.66	1.17	1.36	
-15 (+ 5)	4491	1132	1316	869	3.94	30.73	5.18	1.30	1.52	
-10 (+14)	5555	1400	1628	978	4.45	38.28	5.67	1.43	1.66	

### 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		