

COMPRESSOR DEFINITION

Designation	VNE K212GK
Nominal Voltage/Frequency	100-300 V 33-75 Hz
Engineering Number	950CX72

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 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	12.11	[cm ³] (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 ²]

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: @220V2000RPM			EN12900LBP_HH Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
835	210	245	220	1.03	6.15	3.80	0.96	1.11

TEST CONDITIONS: @220V2400RPM			EN12900LBP_HH Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
969	244	284	256	1.19	7.13	3.79	0.96	1.11

TEST CONDITIONS: @220V3000RPM			EN12900LBP_HH Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
1174	296	344	316	1.46	8.64	3.72	0.94	1.09

TEST CONDITIONS: @220V3600RPM			EN12900LBP_HH Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
1317	332	386	375	1.73	9.69	3.51	0.88	1.03

TEST CONDITIONS: @220V4500RPM			EN12900LBP_HH Fan		Evaporating temperature (Condensing temperature		-35°C (-31°F) 40°C (104°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]
1588	400	465	463	2.13	11.69	3.43	0.86	1.01

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]	[W/W]
-40 (-40)	661	167	194	185	0.89	4.58	3.56	0.90	1.04	
-35 (-31)	904	228	265	217	1.03	6.30	4.18	1.05	1.23	
-30 (-22)	1211	305	355	249	1.18	8.46	4.87	1.23	1.43	
-25 (-13)	1586	400	465	282	1.33	11.12	5.62	1.42	1.65	
-20 (- 4)	2032	512	595	316	1.48	14.32	6.42	1.62	1.88	
-15 (+ 5)	2554	644	748	350	1.64	18.11	7.29	1.84	2.14	
-10 (+14)	3155	795	924	384	1.79	22.54	8.22	2.07	2.41	

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]
-40 (-40)	515	130	151	191	0.92	4.01	2.69	0.68	0.79	
-35 (-31)	729	184	214	226	1.07	5.70	3.23	0.81	0.95	
-30 (-22)	994	251	291	263	1.24	7.80	3.79	0.95	1.11	
-25 (-13)	1316	332	386	302	1.42	10.38	4.36	1.10	1.28	
-20 (- 4)	1698	428	498	342	1.61	13.47	4.96	1.25	1.45	
-15 (+ 5)	2144	540	628	385	1.80	17.13	5.57	1.40	1.63	
-10 (+14)	2657	670	779	429	2.00	21.40	6.19	1.56	1.81	

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]
-40 (-40)	332	84	97	195	0.96	2.99	1.71	0.43	0.50	
-35 (-31)	528	133	155	233	1.12	4.77	2.26	0.57	0.66	
-30 (-22)	765	193	224	274	1.30	6.94	2.78	0.70	0.82	
-25 (-13)	1047	264	307	319	1.51	9.56	3.28	0.83	0.96	
-20 (- 4)	1377	347	404	368	1.72	12.67	3.75	0.95	1.10	
-15 (+ 5)	1760	443	516	420	1.96	16.32	4.20	1.06	1.23	
-10 (+14)	2198	554	644	475	2.20	20.57	4.62	1.16	1.35	

E - PERFORMANCE - CURVES

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]
-40 (-40)	769	194	225	214	1.01	5.33	3.58	0.90	1.05	
-35 (-31)	1037	261	304	249	1.17	7.22	4.18	1.05	1.22	
-30 (-22)	1376	347	403	284	1.33	9.61	4.85	1.22	1.42	
-25 (-13)	1786	450	523	320	1.50	12.53	5.58	1.41	1.63	
-20 (- 4)	2272	572	666	357	1.66	16.01	6.36	1.60	1.86	
-15 (+ 5)	2833	714	830	394	1.83	20.09	7.19	1.81	2.11	
-10 (+14)	3473	875	1018	432	2.00	24.81	8.04	2.03	2.36	

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]
-40 (-40)	604	152	177	217	1.03	4.70	2.79	0.70	0.82	
-35 (-31)	836	211	245	257	1.21	6.54	3.25	0.82	0.95	
-30 (-22)	1128	284	331	299	1.39	8.85	3.77	0.95	1.10	
-25 (-13)	1483	374	435	342	1.58	11.69	4.33	1.09	1.27	
-20 (- 4)	1903	480	558	386	1.78	15.09	4.93	1.24	1.44	
-15 (+ 5)	2389	602	700	431	1.99	19.09	5.54	1.40	1.62	
-10 (+14)	2944	742	863	478	2.21	23.71	6.16	1.55	1.81	

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]
-40 (-40)	445	112	130	218	1.07	4.01	2.04	0.51	0.60	
-35 (-31)	639	161	187	263	1.25	5.78	2.42	0.61	0.71	
-30 (-22)	884	223	259	311	1.45	8.02	2.84	0.72	0.83	
-25 (-13)	1181	298	346	360	1.67	10.79	3.28	0.83	0.96	
-20 (- 4)	1533	386	449	411	1.90	14.10	3.74	0.94	1.09	
-15 (+ 5)	1942	489	569	464	2.15	18.01	4.19	1.06	1.23	
-10 (+14)	2409	607	706	519	2.41	22.54	4.63	1.17	1.36	

E - PERFORMANCE - CURVES

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]
-40 (-40)	910	229	267	261	1.23	6.30	3.48	0.88	1.02	
-35 (-31)	1234	311	362	305	1.43	8.59	4.05	1.02	1.19	
-30 (-22)	1650	416	483	351	1.64	11.52	4.71	1.19	1.38	
-25 (-13)	2157	544	632	398	1.85	15.13	5.42	1.36	1.59	
-20 (- 4)	2756	694	808	447	2.07	19.42	6.17	1.55	1.81	
-15 (+ 5)	3446	868	1010	497	2.30	24.44	6.93	1.75	2.03	
-10 (+14)	4228	1065	1239	549	2.53	30.20	7.70	1.94	2.26	

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]
-40 (-40)	727	183	213	263	1.23	5.67	2.77	0.70	0.81	
-35 (-31)	1003	253	294	313	1.46	7.84	3.21	0.81	0.94	
-30 (-22)	1359	342	398	365	1.70	10.66	3.72	0.94	1.09	
-25 (-13)	1794	452	526	419	1.94	14.14	4.27	1.08	1.25	
-20 (- 4)	2310	582	677	476	2.20	18.32	4.85	1.22	1.42	
-15 (+ 5)	2905	732	851	535	2.47	23.21	5.44	1.37	1.59	
-10 (+14)	3580	902	1049	596	2.75	28.84	6.01	1.51	1.76	

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]
-40 (-40)	549	138	161	260	1.22	4.94	2.11	0.53	0.62	
-35 (-31)	776	195	227	316	1.48	7.01	2.46	0.62	0.72	
-30 (-22)	1070	270	314	374	1.74	9.72	2.86	0.72	0.84	
-25 (-13)	1433	361	420	436	2.02	13.09	3.29	0.83	0.96	
-20 (- 4)	1865	470	546	501	2.31	17.15	3.73	0.94	1.09	
-15 (+ 5)	2364	596	693	568	2.62	21.92	4.17	1.05	1.22	
-10 (+14)	2931	739	859	639	2.94	27.43	4.58	1.15	1.34	

E - PERFORMANCE - CURVES

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]
-40 (-40)	1075	271	315	315	1.46	7.45	3.40	0.86	0.99	
-35 (-31)	1446	364	424	369	1.71	10.07	3.93	0.99	1.15	
-30 (-22)	1923	485	563	425	1.97	13.43	4.54	1.14	1.33	
-25 (-13)	2505	631	734	483	2.23	17.56	5.19	1.31	1.52	
-20 (- 4)	3192	804	935	543	2.51	22.50	5.87	1.48	1.72	
-15 (+ 5)	3984	1004	1167	606	2.79	28.26	6.57	1.66	1.93	
-10 (+14)	4882	1230	1431	671	3.08	34.88	7.28	1.83	2.13	

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]
-40 (-40)	857	216	251	320	1.48	6.67	2.69	0.68	0.79	
-35 (-31)	1185	299	347	376	1.74	9.26	3.16	0.80	0.93	
-30 (-22)	1601	404	469	436	2.02	12.57	3.66	0.92	1.07	
-25 (-13)	2106	531	617	502	2.31	16.61	4.18	1.05	1.23	
-20 (- 4)	2699	680	791	572	2.63	21.42	4.71	1.19	1.38	
-15 (+ 5)	3381	852	991	647	2.97	27.02	5.23	1.32	1.53	
-10 (+14)	4152	1046	1217	728	3.33	33.44	5.72	1.44	1.67	

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]
-40 (-40)	631	159	185	296	1.38	5.68	2.13	0.54	0.63	
-35 (-31)	915	231	268	364	1.69	8.27	2.51	0.63	0.73	
-30 (-22)	1271	320	372	440	2.04	11.54	2.88	0.73	0.84	
-25 (-13)	1698	428	498	523	2.42	15.51	3.25	0.82	0.95	
-20 (- 4)	2198	554	644	613	2.83	20.21	3.60	0.91	1.05	
-15 (+ 5)	2769	698	811	712	3.27	25.68	3.90	0.98	1.14	
-10 (+14)	3412	860	1000	819	3.75	31.93	4.15	1.05	1.22	

E - PERFORMANCE - CURVES

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]
-40 (-40)	1253	316	367	385	1.79	8.68	3.25	0.82	0.95	
-35 (-31)	1706	430	500	454	2.10	11.88	3.77	0.95	1.10	
-30 (-22)	2279	574	668	527	2.43	15.91	4.33	1.09	1.27	
-25 (-13)	2970	748	870	604	2.78	20.83	4.91	1.24	1.44	
-20 (- 4)	3780	953	1108	685	3.15	26.64	5.51	1.39	1.61	
-15 (+ 5)	4709	1187	1380	771	3.54	33.40	6.11	1.54	1.79	
-10 (+14)	5757	1451	1687	861	3.95	41.13	6.69	1.69	1.96	

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]
-40 (-40)	973	245	285	380	1.76	7.58	2.56	0.65	0.75	
-35 (-31)	1370	345	401	458	2.11	10.71	3.00	0.75	0.88	
-30 (-22)	1870	471	548	540	2.49	14.67	3.46	0.87	1.01	
-25 (-13)	2472	623	724	627	2.88	19.49	3.94	0.99	1.15	
-20 (- 4)	3176	800	931	718	3.29	25.19	4.42	1.11	1.30	
-15 (+ 5)	3984	1004	1167	814	3.72	31.83	4.90	1.23	1.44	
-10 (+14)	4894	1233	1434	914	4.17	39.42	5.35	1.35	1.57	

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]
-40 (-40)	704	177	206	358	1.66	6.34	1.97	0.50	0.58	
-35 (-31)	1041	262	305	446	2.06	9.41	2.33	0.59	0.68	
-30 (-22)	1464	369	429	539	2.48	13.30	2.71	0.68	0.79	
-25 (-13)	1974	497	578	636	2.92	18.03	3.10	0.78	0.91	
-20 (- 4)	2570	648	753	738	3.38	23.64	3.49	0.88	1.02	
-15 (+ 5)	3253	820	953	845	3.86	30.17	3.86	0.97	1.13	
-10 (+14)	4023	1014	1179	956	4.37	37.64	4.20	1.06	1.23	

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		