

COMPRESSOR DEFINITION

Designation	VNE K610Z
Nominal Voltage/Frequency	100-300 V 33-75 Hz
Engineering Number	260BX71

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	100-300 / 33-75	[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	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	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[hp]
2 Displacement	9.99	[cm ³] (0.610 cu.in)
2.1 Bore [mm]	26.497	
2.2 Stroke [mm]	18.120	
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	MST22AMK-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			EN12900HBP_HH Fan		Evaporating temperature (Condensing temperature		5°C (41°F) 50°C (122°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]
2150	542	630	247	1.04	14.70	8.70	2.19	2.55

TEST CONDITIONS: @220V2400RPM			EN12900HBP_HH Fan		Evaporating temperature (Condensing temperature		5°C (41°F) 50°C (122°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]
2500	630	733	293	1.26	17.09	8.53	2.15	2.50

TEST CONDITIONS: @220V3000RPM			EN12900HBP_HH Fan		Evaporating temperature (Condensing temperature		5°C (41°F) 50°C (122°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]
3067	773	899	374	1.61	20.97	8.20	2.07	2.40

TEST CONDITIONS: @220V4500RPM			EN12900HBP_HH Fan		Evaporating temperature (Condensing temperature		5°C (41°F) 50°C (122°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]
4200	1058	1231	595	2.61	28.71	7.06	1.78	2.07

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]
-15	(+ 5)	1037	261	304	147	0.60	6.06	7.06	1.78	2.07
-10	(+14)	1340	338	393	163	0.67	7.87	8.23	2.07	2.41
-5	(+23)	1713	432	502	178	0.73	10.10	9.62	2.42	2.82
0	(+32)	2156	543	632	192	0.79	12.77	11.22	2.83	3.29
+5	(+41)	2669	673	782	205	0.84	15.91	13.02	3.28	3.81
+10	(+50)	3252	819	953	217	0.90	19.52	14.99	3.78	4.39

E - PERFORMANCE - CURVES

TEST CONDITIONS:		EN12900HH			(Condensing temperature 45°C (+113°F))					
@220V2000RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	930	234	273	161	0.66	5.93	5.76	1.45	1.69	
-10 (+14)	1193	301	350	182	0.74	7.64	6.57	1.66	1.93	
-5 (+23)	1519	383	445	200	0.82	9.77	7.58	1.91	2.22	
0 (+32)	1906	480	559	217	0.90	12.33	8.77	2.21	2.57	
+5 (+41)	2356	594	690	233	0.97	15.34	10.11	2.55	2.96	
+10 (+50)	2868	723	840	247	1.03	18.81	11.61	2.92	3.40	

TEST CONDITIONS:		EN12900HH			(Condensing temperature 55°C (+131°F))					
@220V2000RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	783	197	229	168	0.69	5.51	4.67	1.18	1.37	
-10 (+14)	1009	254	296	194	0.80	7.13	5.21	1.31	1.53	
-5 (+23)	1289	325	378	218	0.91	9.15	5.91	1.49	1.73	
0 (+32)	1623	409	476	240	1.01	11.60	6.75	1.70	1.98	
+5 (+41)	2012	507	590	261	1.10	14.49	7.72	1.95	2.26	
+10 (+50)	2456	619	720	279	1.20	17.83	8.80	2.22	2.58	

TEST CONDITIONS:		EN12900HH			(Condensing temperature 35°C (+95°F))					
@220V2400RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	1231	310	361	178	0.73	7.20	6.92	1.74	2.03	
-10 (+14)	1583	399	464	196	0.81	9.30	8.08	2.04	2.37	
-5 (+23)	2004	505	587	213	0.89	11.82	9.40	2.37	2.75	
0 (+32)	2495	629	731	230	0.96	14.78	10.87	2.74	3.18	
+5 (+41)	3055	770	895	245	1.03	18.21	12.46	3.14	3.65	
+10 (+50)	3685	929	1080	260	1.10	22.11	14.17	3.57	4.15	

TEST CONDITIONS:		EN12900HH			(Condensing temperature 45°C (+113°F))					
@220V2400RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	1048	264	307	190	0.79	6.68	5.51	1.39	1.62	
-10 (+14)	1367	344	400	213	0.89	8.75	6.42	1.62	1.88	
-5 (+23)	1749	441	512	234	0.98	11.25	7.45	1.88	2.18	
0 (+32)	2195	553	643	255	1.07	14.19	8.61	2.17	2.52	
+5 (+41)	2705	682	793	274	1.15	17.61	9.87	2.49	2.89	
+10 (+50)	3279	826	961	293	1.23	21.51	11.21	2.83	3.29	

E - PERFORMANCE - CURVES

TEST CONDITIONS:		EN12900HH			(Condensing temperature 55°C (+131°F))					
@220V2400RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	864	218	253	198	0.82	6.09	4.36	1.10	1.28	
-10 (+14)	1135	286	333	227	0.95	8.02	5.01	1.26	1.47	
-5 (+23)	1464	369	429	254	1.07	10.40	5.77	1.45	1.69	
0 (+32)	1852	467	543	280	1.19	13.23	6.62	1.67	1.94	
+5 (+41)	2297	579	673	305	1.30	16.54	7.54	1.90	2.21	
+10 (+50)	2802	706	821	328	1.40	20.35	8.53	2.15	2.50	

TEST CONDITIONS:		EN12900HH			(Condensing temperature 35°C (+95°F))					
@220V3000RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	1486	375	435	228	0.95	8.69	6.52	1.64	1.91	
-10 (+14)	1905	480	558	252	1.06	11.18	7.56	1.90	2.21	
-5 (+23)	2415	609	708	276	1.17	14.23	8.74	2.20	2.56	
0 (+32)	3016	760	884	300	1.27	17.87	10.06	2.54	2.95	
+5 (+41)	3709	935	1087	322	1.37	22.10	11.51	2.90	3.37	
+10 (+50)	4493	1132	1316	344	1.46	26.97	13.06	3.29	3.83	

TEST CONDITIONS:		EN12900HH			(Condensing temperature 45°C (+113°F))					
@220V3000RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	1287	324	377	242	1.00	8.21	5.33	1.34	1.56	
-10 (+14)	1663	419	487	271	1.14	10.65	6.14	1.55	1.80	
-5 (+23)	2122	535	622	300	1.27	13.65	7.08	1.78	2.07	
0 (+32)	2664	671	781	328	1.40	17.23	8.12	2.05	2.38	
+5 (+41)	3289	829	964	355	1.52	21.41	9.27	2.34	2.72	
+10 (+50)	3997	1007	1171	381	1.63	26.22	10.49	2.64	3.07	

TEST CONDITIONS:		EN12900HH			(Condensing temperature 55°C (+131°F))					
@220V3000RPM		Fan								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-15 (+5)	1076	271	315	251	1.05	7.57	4.29	1.08	1.26	
-10 (+14)	1403	353	411	286	1.21	9.91	4.91	1.24	1.44	
-5 (+23)	1804	455	529	320	1.36	12.81	5.63	1.42	1.65	
0 (+32)	2280	574	668	354	1.51	16.29	6.43	1.62	1.88	
+5 (+41)	2830	713	829	388	1.66	20.38	7.30	1.84	2.14	
+10 (+50)	3455	871	1012	420	1.80	25.09	8.23	2.07	2.41	

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]
-15 (+5)	1715	432	503	275	1.16	10.03	6.24	1.57	1.83	
-10 (+14)	2196	553	643	306	1.29	12.89	7.17	1.81	2.10	
-5 (+23)	2777	700	814	339	1.44	16.37	8.19	2.06	2.40	
0 (+32)	3460	872	1014	373	1.59	20.50	9.28	2.34	2.72	
+5 (+41)	4244	1069	1244	408	1.74	25.29	10.40	2.62	3.05	
+10 (+50)	5129	1292	1503	444	1.90	30.79	11.55	2.91	3.38	

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]
-15 (+5)	1479	373	433	289	1.23	9.43	5.12	1.29	1.50	
-10 (+14)	1911	482	560	325	1.39	12.24	5.88	1.48	1.72	
-5 (+23)	2436	614	714	362	1.56	15.67	6.73	1.70	1.97	
0 (+32)	3054	770	895	400	1.72	19.75	7.63	1.92	2.24	
+5 (+41)	3766	949	1103	439	1.89	24.51	8.58	2.16	2.51	
+10 (+50)	4570	1152	1339	479	2.06	29.98	9.54	2.40	2.80	

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]
-15 (+5)	1254	316	367	300	1.27	8.82	4.18	1.05	1.22	
-10 (+14)	1627	410	477	342	1.45	11.50	4.76	1.20	1.39	
-5 (+23)	2084	525	611	385	1.64	14.81	5.41	1.36	1.59	
0 (+32)	2627	662	770	429	1.84	18.78	6.13	1.54	1.80	
+5 (+41)	3255	820	954	473	2.03	23.44	6.88	1.73	2.02	
+10 (+50)	3968	1000	1163	519	2.23	28.81	7.65	1.93	2.24	

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]
-15 (+5)	2042	515	598	350	1.50	11.94	5.83	1.47	1.71	
-10 (+14)	2617	659	767	391	1.68	15.36	6.70	1.69	1.96	
-5 (+23)	3307	833	969	437	1.88	19.49	7.57	1.91	2.22	
0 (+32)	4111	1036	1205	487	2.10	24.36	8.43	2.12	2.47	
+5 (+41)	5031	1268	1474	543	2.35	29.98	9.26	2.33	2.71	
+10 (+50)	6064	1528	1777	604	2.63	36.40	10.05	2.53	2.94	

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]
-15	(+ 5)	1765	445	517	366	1.56	11.26	4.82	1.21	1.41
-10	(+14)	2284	576	669	412	1.77	14.62	5.54	1.40	1.62
-5	(+23)	2910	733	853	463	1.99	18.71	6.29	1.59	1.84
0	(+32)	3642	918	1067	516	2.23	23.55	7.06	1.78	2.07
+5	(+41)	4480	1129	1313	574	2.49	29.17	7.81	1.97	2.29
+10	(+50)	5424	1367	1589	635	2.76	35.59	8.54	2.15	2.50

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]
-15	(+ 5)	1473	371	432	377	1.61	10.36	3.91	0.99	1.15
-10	(+14)	1933	487	566	431	1.84	13.66	4.49	1.13	1.32
-5	(+23)	2491	628	730	487	2.09	17.69	5.11	1.29	1.50
0	(+32)	3146	793	922	545	2.36	22.49	5.77	1.45	1.69
+5	(+41)	3899	983	1143	606	2.63	28.07	6.44	1.62	1.89
+10	(+50)	4749	1197	1392	669	2.92	34.48	7.10	1.79	2.08

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		