

COMPRESSOR DEFINITION

Designation	VNE X621U
Nominal Voltage/Frequency	208-240 V 50-60 Hz
Engineering Number	866FX26

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	208-240 / 50-60	[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 - 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	18.4	[kgf/cm ²] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1	[hp]
2 Displacement	21.02	[cm ³] (1.283 cu.in)
2.1 Bore [mm]	34.120	
2.2 Stroke [mm]	23.000	
3 Lubricant charge	400	[ml] (13.53 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	11.3	[kg] (24.91 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	208-240 V 50-60 Hz 1~ (Single phase)	
2 Starting device type	Inverter	
2.1 Starting device	CF20A01 P 0.0 X	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	USP-102-83	
6 Start winding resistance	1.94	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	1.94	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (110/250 Hz)	4.60	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (110/250 Hz)	4.60	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (110/250 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - UL - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V2200RPM			EN12900MBP Fan		Evaporating temperature (Condensing temperature)		-10°C (14°F) 45°C (113°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
4234	1067	1241	524	2.36	15.24	8.09	2.04	2.37

TEST CONDITIONS: @220V3000RPM			EN12900MBP Fan		Evaporating temperature (Condensing temperature)		-10°C (14°F) 45°C (113°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
5685	1433	1666	721	3.23	20.46	7.89	1.99	2.31

TEST CONDITIONS: @220V3600RPM			EN12900MBP Fan		Evaporating temperature (Condensing temperature)		-10°C (14°F) 45°C (113°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
6814	1717	1997	898	4.00	24.52	7.59	1.91	2.22

TEST CONDITIONS: @220V4500RPM			EN12900MBP Fan		Evaporating temperature (Condensing temperature)		-10°C (14°F) 45°C (113°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
7998	2016	2344	1128	4.98	28.78	7.09	1.79	2.08

TEST CONDITIONS: @220V5000RPM			EN12900MBP Fan		Evaporating temperature (Condensing temperature)		-10°C (14°F) 45°C (113°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
8559	2157	2508	1254	5.52	30.80	6.82	1.72	2.00

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2200RPM		EN12900 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	3265	823	957	399	2.01	10.57	8.18	2.06	2.40	
-15 (+ 5)	4012	1011	1176	439	2.16	13.09	9.10	2.29	2.67	
-10 (+14)	4869	1227	1427	474	2.29	15.97	10.22	2.58	3.00	
-5 (+23)	5851	1474	1714	502	2.38	19.32	11.67	2.94	3.42	
0 (+32)	6969	1756	2042	519	2.43	23.20	13.53	3.41	3.97	
+5 (+41)	8239	2076	2414	521	2.42	27.70	15.92	4.01	4.67	
+10 (+50)	9672	2437	2834	507	2.32	32.89	18.94	4.77	5.55	

TEST CONDITIONS: @220V2200RPM		EN12900 Fan			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	2803	706	821	434	1.99	9.96	6.55	1.65	1.92	
-15 (+ 5)	3481	877	1020	484	2.17	12.45	7.23	1.82	2.12	
-10 (+14)	4257	1073	1248	533	2.36	15.32	7.94	2.00	2.33	
-5 (+23)	5146	1297	1508	578	2.53	18.65	8.79	2.22	2.58	
0 (+32)	6159	1552	1805	616	2.68	22.54	9.89	2.49	2.90	
+5 (+41)	7311	1842	2142	644	2.79	27.05	11.33	2.85	3.32	
+10 (+50)	8615	2171	2525	659	2.84	32.28	13.22	3.33	3.87	

TEST CONDITIONS: @220V2200RPM		EN12900 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	2395	603	702	467	2.22	9.47	5.01	1.26	1.47	
-15 (+ 5)	3007	758	881	519	2.41	11.96	5.84	1.47	1.71	
-10 (+14)	3705	934	1086	575	2.62	14.85	6.54	1.65	1.92	
-5 (+23)	4503	1135	1320	630	2.84	18.21	7.20	1.81	2.11	
0 (+32)	5415	1365	1587	682	3.05	22.14	7.92	2.00	2.32	
+5 (+41)	6453	1626	1891	728	3.24	26.70	8.81	2.22	2.58	
+10 (+50)	7630	1923	2236	765	3.39	31.99	9.97	2.51	2.92	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3000RPM		EN12900 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	4436	1118	1300	559	2.56	14.37	7.94	2.00	2.33	
-15 (+ 5)	5423	1367	1589	616	2.78	17.69	8.76	2.21	2.57	
-10 (+14)	6551	1651	1920	667	2.97	21.49	9.78	2.46	2.87	
-5 (+23)	7838	1975	2297	708	3.12	25.88	11.09	2.79	3.25	
0 (+32)	9303	2344	2726	733	3.21	30.97	12.79	3.22	3.75	
+5 (+41)	10962	2762	3212	738	3.21	36.85	14.97	3.77	4.39	
+10 (+50)	12834	3234	3761	719	3.11	43.65	17.73	4.47	5.19	

TEST CONDITIONS: @220V3000RPM		EN12900 Fan			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	3820	963	1119	603	2.69	13.58	6.42	1.62	1.88	
-15 (+ 5)	4722	1190	1384	674	2.97	16.88	7.04	1.77	2.06	
-10 (+14)	5747	1448	1684	744	3.26	20.68	7.68	1.94	2.25	
-5 (+23)	6915	1743	2026	809	3.53	25.07	8.45	2.13	2.48	
0 (+32)	8242	2077	2415	864	3.77	30.16	9.45	2.38	2.77	
+5 (+41)	9747	2456	2856	905	3.95	36.07	10.76	2.71	3.15	
+10 (+50)	11448	2885	3355	927	4.04	42.89	12.48	3.15	3.66	

TEST CONDITIONS: @220V3000RPM		EN12900 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	3245	818	951	636	2.88	12.84	5.00	1.26	1.47	
-15 (+ 5)	4062	1024	1190	709	3.17	16.16	5.78	1.46	1.69	
-10 (+14)	4984	1256	1461	786	3.49	19.98	6.42	1.62	1.88	
-5 (+23)	6032	1520	1768	864	3.82	24.40	7.03	1.77	2.06	
0 (+32)	7222	1820	2116	938	4.14	29.53	7.69	1.94	2.25	
+5 (+41)	8573	2160	2512	1003	4.43	35.48	8.50	2.14	2.49	
+10 (+50)	10102	2546	2960	1055	4.67	42.35	9.57	2.41	2.80	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3600RPM		EN12900 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	5224	1316	1531	688	3.05	16.92	7.59	1.91	2.22	
-15 (+ 5)	6371	1605	1867	762	3.35	20.78	8.33	2.10	2.44	
-10 (+14)	7679	1935	2250	829	3.61	25.19	9.24	2.33	2.71	
-5 (+23)	9171	2311	2687	883	3.83	30.28	10.40	2.62	3.05	
0 (+32)	10866	2738	3184	918	3.96	36.17	11.91	3.00	3.49	
+5 (+41)	12786	3222	3747	929	3.99	42.99	13.86	3.49	4.06	
+10 (+50)	14952	3768	4381	909	3.89	50.86	16.33	4.12	4.79	

TEST CONDITIONS: @220V3600RPM		EN12900 Fan			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	4525	1140	1326	735	3.25	16.08	6.23	1.57	1.83	
-15 (+ 5)	5580	1406	1635	825	3.63	19.95	6.79	1.71	1.99	
-10 (+14)	6776	1708	1986	915	4.02	24.38	7.37	1.86	2.16	
-5 (+23)	8135	2050	2384	999	4.38	29.50	8.06	2.03	2.36	
0 (+32)	9678	2439	2836	1072	4.71	35.42	8.94	2.25	2.62	
+5 (+41)	11426	2879	3348	1128	4.96	42.28	10.12	2.55	2.96	
+10 (+50)	13399	3377	3926	1160	5.12	50.20	11.67	2.94	3.42	

TEST CONDITIONS: @220V3600RPM		EN12900 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	3840	968	1125	769	3.43	15.20	4.91	1.24	1.44	
-15 (+ 5)	4794	1208	1405	859	3.80	19.07	5.62	1.42	1.65	
-10 (+14)	5869	1479	1720	956	4.22	23.52	6.21	1.57	1.82	
-5 (+23)	7086	1786	2076	1054	4.66	28.66	6.76	1.70	1.98	
0 (+32)	8468	2134	2481	1149	5.08	34.62	7.36	1.85	2.16	
+5 (+41)	10034	2528	2940	1233	5.47	41.52	8.10	2.04	2.37	
+10 (+50)	11805	2975	3459	1302	5.80	49.49	9.06	2.28	2.65	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4500RPM		EN12900 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	6122	1543	1794	872	3.87	19.83	7.02	1.77	2.06	
-15 (+ 5)	7455	1879	2184	978	4.31	24.32	7.60	1.92	2.23	
-10 (+14)	8977	2262	2631	1077	4.72	29.45	8.31	2.10	2.44	
-5 (+23)	10713	2700	3139	1161	5.07	35.37	9.23	2.33	2.71	
0 (+32)	12686	3197	3717	1222	5.32	42.23	10.43	2.63	3.06	
+5 (+41)	14922	3760	4372	1252	5.44	50.17	11.98	3.02	3.51	
+10 (+50)	17444	4396	5111	1242	5.38	59.33	13.97	3.52	4.09	

TEST CONDITIONS: @220V4500RPM		EN12900 Fan			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	5385	1357	1578	916	4.01	19.14	5.93	1.50	1.74	
-15 (+ 5)	6630	1671	1943	1039	4.54	23.71	6.40	1.61	1.88	
-10 (+14)	8041	2026	2356	1165	5.09	28.93	6.87	1.73	2.01	
-5 (+23)	9644	2430	2826	1287	5.64	34.96	7.43	1.87	2.18	
0 (+32)	11462	2889	3359	1396	6.13	41.95	8.15	2.05	2.39	
+5 (+41)	13521	3407	3962	1484	6.54	50.03	9.10	2.29	2.67	
+10 (+50)	15845	3993	4643	1543	6.83	59.36	10.36	2.61	3.04	

TEST CONDITIONS: @220V4500RPM		EN12900 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	4581	1155	1342	952	4.19	18.13	4.75	1.20	1.39	
-15 (+ 5)	5699	1436	1670	1069	4.69	22.68	5.36	1.35	1.57	
-10 (+14)	6961	1754	2040	1201	5.27	27.90	5.85	1.47	1.71	
-5 (+23)	8393	2115	2459	1338	5.89	33.94	6.30	1.59	1.85	
0 (+32)	10019	2525	2936	1473	6.51	40.96	6.79	1.71	1.99	
+5 (+41)	11863	2990	3476	1597	7.09	49.09	7.40	1.86	2.17	
+10 (+50)	13950	3515	4088	1703	7.60	58.48	8.19	2.06	2.40	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V5000RPM		EN12900 Fan			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	6395	1612	1874	947	4.27	20.71	6.75	1.70	1.98	
-15 (+ 5)	7793	1964	2284	1072	4.79	25.42	7.25	1.83	2.13	
-10 (+14)	9392	2367	2752	1193	5.30	30.81	7.86	1.98	2.30	
-5 (+23)	11217	2827	3287	1299	5.75	37.04	8.64	2.18	2.53	
0 (+32)	13295	3350	3896	1380	6.09	44.25	9.67	2.44	2.83	
+5 (+41)	15650	3944	4586	1428	6.29	52.61	11.01	2.78	3.23	
+10 (+50)	18308	4614	5365	1431	6.29	62.27	12.74	3.21	3.73	

TEST CONDITIONS: @220V5000RPM		EN12900 Fan			(Condensing temperature 45°C (+113°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	5699	1436	1670	985	4.25	20.25	5.83	1.47	1.71	
-15 (+ 5)	7018	1769	2056	1124	4.84	25.10	6.26	1.58	1.83	
-10 (+14)	8517	2146	2496	1271	5.48	30.65	6.68	1.68	1.96	
-5 (+23)	10223	2576	2995	1417	6.12	37.06	7.17	1.81	2.10	
0 (+32)	12159	3064	3563	1550	6.71	44.50	7.80	1.96	2.28	
+5 (+41)	14353	3617	4206	1661	7.21	53.11	8.63	2.17	2.53	
+10 (+50)	16829	4241	4931	1741	7.59	63.04	9.74	2.45	2.85	

TEST CONDITIONS: @220V5000RPM		EN12900 Fan			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-20 (- 4)	4867	1226	1426	1026	4.48	19.26	4.69	1.18	1.38	
-15 (+ 5)	6043	1523	1771	1155	5.02	24.04	5.25	1.32	1.54	
-10 (+14)	7378	1859	2162	1305	5.67	29.57	5.69	1.43	1.67	
-5 (+23)	8898	2242	2607	1466	6.39	35.99	6.10	1.54	1.79	
0 (+32)	10629	2678	3114	1627	7.11	43.45	6.53	1.65	1.91	
+5 (+41)	12596	3174	3691	1778	7.81	52.12	7.06	1.78	2.07	
+10 (+50)	14826	3736	4344	1911	8.44	62.15	7.76	1.95	2.27	

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		