

COMPRESSOR DEFINITION

Designation	VEG Y6L
Nominal Voltage/Frequency	230 V 53-150 Hz
Engineering Number	513800064

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	HFO		
3 Nominal voltage and frequency	230 / 53-150	[V / Hz]	
4 Application type	Low-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°F)	
5 Motor type	BPM		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	85 to 110 V	85 to 110 V
8.2 LBP (43°C Ambient temperature)	Static	85 to 110 V	85 to 110 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	15.72	[kgf/cm ²] (224 psig)	/ °C - °F
9.2 Peak	19.82	[kgf/cm ²] (282 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	6.36	[cm ³] (0.388 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	16.000	
3 Lubricant charge	430	[ml] (14.54 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	11.31	[kg] (24.93 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 53-150 Hz 3 ~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	VCC31156XXXX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	VCC31156XXXXX	
6 Start winding resistance	6.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	6.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	3.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	3.30	[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		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @100V1600RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°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]
383	97	112	65	1.02	2.65	5.87	1.48	1.72

TEST CONDITIONS: @100V2000RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°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]
470	118	138	79	1.23	3.26	5.96	1.50	1.75

TEST CONDITIONS: @100V2400RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°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]
570	144	167	97	1.47	3.95	5.85	1.47	1.71

TEST CONDITIONS: @100V3000RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°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]
739	186	217	128	1.89	5.12	5.76	1.45	1.69

TEST CONDITIONS: @100V3600RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°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]
872	220	256	155	2.25	6.04	5.61	1.41	1.64

TEST CONDITIONS: @100V4500RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°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]
1114	281	326	207	2.90	7.72	5.39	1.36	1.58

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V1600RPM		ASHRAE32 Static			(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]
-35 (-31)	232	58	68	40	0.69	0.00	5.89	1.48	1.73	
-30 (-22)	333	84	97	46	0.78	0.00	7.02	1.77	2.06	
-25 (-13)	420	106	123	53	0.87	0.00	7.86	1.98	2.30	
-20 (- 4)	512	129	150	59	0.96	0.00	8.65	2.18	2.54	
-15 (+ 5)	625	157	183	65	1.05	0.00	9.61	2.42	2.82	
-10 (+14)	776	196	227	71	1.13	0.00	10.97	2.76	3.21	
-5 (+23)	983	248	288	76	1.20	0.00	12.95	3.26	3.80	

TEST CONDITIONS: @100V1600RPM		ASHRAE32 Static			(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]
-35 (-31)	187	47	55	41	0.67	0.00	4.58	1.16	1.34	
-30 (-22)	279	70	82	49	0.78	0.00	5.63	1.42	1.65	
-25 (-13)	365	92	107	57	0.90	0.00	6.40	1.61	1.87	
-20 (- 4)	461	116	135	65	1.02	0.00	7.12	1.79	2.09	
-15 (+ 5)	585	147	171	73	1.13	0.00	8.03	2.02	2.35	
-10 (+14)	754	190	221	80	1.24	0.00	9.34	2.35	2.74	
-5 (+23)	985	248	288	88	1.34	0.00	11.29	2.84	3.31	

TEST CONDITIONS: @100V1600RPM		ASHRAE32 Static			(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]
-35 (-31)	161	41	47	41	0.67	0.00	3.85	0.97	1.13	
-30 (-22)	230	58	67	50	0.80	0.00	4.66	1.17	1.36	
-25 (-13)	299	75	88	59	0.94	0.00	5.20	1.31	1.52	
-20 (- 4)	384	97	113	69	1.08	0.00	5.70	1.44	1.67	
-15 (+ 5)	504	127	148	79	1.22	0.00	6.39	1.61	1.87	
-10 (+14)	675	170	198	89	1.36	0.00	7.51	1.89	2.20	
-5 (+23)	914	230	268	98	1.50	0.00	9.26	2.33	2.71	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V2000RPM		ASHRAE32 Static			(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]
-35 (-31)	272	69	80	54	0.92	0.00	5.16	1.30	1.51	
-30 (-22)	379	95	111	56	0.92	0.00	6.50	1.64	1.90	
-25 (-13)	501	126	147	63	1.01	0.00	7.64	1.92	2.24	
-20 (- 4)	643	162	188	72	1.16	0.00	8.71	2.19	2.55	
-15 (+ 5)	810	204	237	82	1.31	0.00	9.84	2.48	2.88	
-10 (+14)	1005	253	295	91	1.43	0.00	11.16	2.81	3.27	
-5 (+23)	1234	311	362	97	1.48	0.00	12.80	3.23	3.75	

TEST CONDITIONS: @100V2000RPM		ASHRAE32 Static			(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]
-35 (-31)	238	60	70	79	0.80	0.00	3.16	0.80	0.92	
-30 (-22)	322	81	94	77	0.92	0.00	4.48	1.13	1.31	
-25 (-13)	426	107	125	79	1.10	0.00	5.61	1.41	1.64	
-20 (- 4)	556	140	163	85	1.30	0.00	6.67	1.68	1.96	
-15 (+ 5)	714	180	209	93	1.47	0.00	7.80	1.97	2.29	
-10 (+14)	907	228	266	99	1.57	0.00	9.13	2.30	2.67	
-5 (+23)	1137	287	333	104	1.56	0.00	10.77	2.71	3.16	

TEST CONDITIONS: @100V2000RPM		ASHRAE32 Static			(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]
-35 (-31)	225	57	66	57	0.87	0.00	4.08	1.03	1.20	
-30 (-22)	310	78	91	60	1.01	0.00	5.12	1.29	1.50	
-25 (-13)	421	106	123	69	1.16	0.00	5.97	1.50	1.75	
-20 (- 4)	562	142	165	82	1.30	0.00	6.75	1.70	1.98	
-15 (+ 5)	737	186	216	96	1.38	0.00	7.60	1.92	2.23	
-10 (+14)	951	240	279	110	1.36	0.00	8.65	2.18	2.54	
-5 (+23)	1208	304	354	122	1.19	0.00	10.03	2.53	2.94	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V3600RPM		ASHRAE32 Static			(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]
-35 (-31)	528	133	155	104	1.60	0.00	5.07	1.28	1.49	
-30 (-22)	693	175	203	119	1.84	0.00	5.81	1.46	1.70	
-25 (-13)	902	227	264	136	2.03	0.00	6.65	1.68	1.95	
-20 (- 4)	1156	291	339	153	2.20	0.00	7.58	1.91	2.22	
-15 (+ 5)	1454	366	426	170	2.38	0.00	8.59	2.16	2.52	
-10 (+14)	1797	453	526	186	2.61	0.00	9.69	2.44	2.84	
-5 (+23)	2184	550	640	201	2.92	0.00	10.87	2.74	3.19	

TEST CONDITIONS: @100V3600RPM		ASHRAE32 Static			(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]
-35 (-31)	468	118	137	105	1.55	0.00	4.50	1.13	1.32	
-30 (-22)	633	159	185	122	1.82	0.00	5.20	1.31	1.52	
-25 (-13)	846	213	248	141	2.03	0.00	6.00	1.51	1.76	
-20 (- 4)	1109	280	325	160	2.22	0.00	6.90	1.74	2.02	
-15 (+ 5)	1421	358	417	179	2.41	0.00	7.91	1.99	2.32	
-10 (+14)	1782	449	522	198	2.65	0.00	9.01	2.27	2.64	
-5 (+23)	2192	552	642	215	2.97	0.00	10.20	2.57	2.99	

TEST CONDITIONS: @100V3600RPM		ASHRAE32 Static			(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]
-35 (-31)	439	111	129	104	1.55	0.00	4.21	1.06	1.23	
-30 (-22)	581	146	170	124	1.88	0.00	4.73	1.19	1.39	
-25 (-13)	777	196	228	145	2.15	0.00	5.37	1.35	1.57	
-20 (- 4)	1026	259	301	168	2.39	0.00	6.13	1.54	1.80	
-15 (+ 5)	1329	335	390	190	2.64	0.00	7.00	1.76	2.05	
-10 (+14)	1686	425	494	211	2.92	0.00	7.97	2.01	2.34	
-5 (+23)	2096	528	614	231	3.28	0.00	9.06	2.28	2.65	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @100V4500RPM		ASHRAE32 Static			(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]
-35 (-31)	599	151	176	121	1.78	0.00	4.86	1.23	1.42	
-30 (-22)	684	172	200	120	1.90	0.00	5.73	1.44	1.68	
-25 (-13)	897	226	263	137	2.12	0.00	6.55	1.65	1.92	
-20 (- 4)	1201	303	352	162	2.38	0.00	7.41	1.87	2.17	
-15 (+ 5)	1557	392	456	188	2.65	0.00	8.39	2.11	2.46	
-10 (+14)	1926	485	564	205	2.85	0.00	9.57	2.41	2.81	
-5 (+23)	2270	572	665	205	2.96	0.00	11.05	2.79	3.24	

TEST CONDITIONS: @100V4500RPM		ASHRAE32 Static			(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]
-35 (-31)	510	128	149	124	1.83	0.00	4.32	1.09	1.27	
-30 (-22)	701	177	205	142	2.15	0.00	5.04	1.27	1.48	
-25 (-13)	999	252	293	173	2.52	0.00	5.72	1.44	1.67	
-20 (- 4)	1365	344	400	208	2.90	0.00	6.43	1.62	1.89	
-15 (+ 5)	1761	444	516	239	3.24	0.00	7.28	1.83	2.13	
-10 (+14)	2148	541	630	258	3.49	0.00	8.33	2.10	2.44	
-5 (+23)	2489	627	729	257	3.61	0.00	9.69	2.44	2.84	

TEST CONDITIONS: @100V4500RPM		ASHRAE32 Static			(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]
-35 (-31)	548	138	161	139	2.05	0.00	3.86	0.97	1.13	
-30 (-22)	729	184	214	161	2.36	0.00	4.53	1.14	1.33	
-25 (-13)	995	251	292	192	2.68	0.00	5.17	1.30	1.52	
-20 (- 4)	1307	329	383	223	2.98	0.00	5.86	1.48	1.72	
-15 (+ 5)	1627	410	477	247	3.20	0.00	6.68	1.68	1.96	
-10 (+14)	1917	483	562	254	3.30	0.00	7.71	1.94	2.26	
-5 (+23)	2138	539	626	236	3.22	0.00	9.05	2.28	2.65	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		