

### COMPRESSOR DEFINITION

Designation	VEG Y6H
Nominal Voltage/Frequency	230 V 53-150 Hz
Engineering Number	513800055

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	230 / 53-150	[ V / Hz ]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°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	103 to 140 V	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	103 to 140 V	103 to 140 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm <sup>2</sup> ] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	6.36	[cm <sup>3</sup> ] (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 / ISO10	
4 Weight (with oil charge)	10.9	[kg] (24.03 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (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)	-	[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	UL	

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: <b>@115V1600RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>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]
330	83	97	56	0.79	1.88	5.92	1.49	1.73

TEST CONDITIONS: <b>@115V2000RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>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]
410	103	120	69	0.95	2.33	5.94	1.50	1.74

TEST CONDITIONS: <b>@115V2250RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>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]
510	129	149	84	1.14	2.90	6.09	1.53	1.78

TEST CONDITIONS: <b>@115V3000RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>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]
670	169	196	113	1.50	3.81	5.94	1.50	1.74

TEST CONDITIONS: <b>@115V4500RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>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]
965	243	283	177	2.23	5.48	5.46	1.38	1.60

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V1600RPM		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)	194	49	57	34	0.52	1.10	5.66	1.43	1.66	
-30 (-22)	268	68	79	40	0.61	1.52	6.63	1.67	1.94	
-25 (-13)	360	91	106	47	0.70	2.05	7.67	1.93	2.25	
-20 (- 4)	471	119	138	54	0.78	2.68	8.80	2.22	2.58	
-15 (+ 5)	602	152	176	60	0.86	3.43	10.06	2.54	2.95	
-10 (+14)	752	189	220	65	0.93	4.31	11.51	2.90	3.37	

TEST CONDITIONS: @115V1600RPM		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)	177	45	52	36	0.54	1.00	4.99	1.26	1.46	
-30 (-22)	250	63	73	42	0.63	1.41	5.93	1.49	1.74	
-25 (-13)	340	86	100	50	0.72	1.93	6.83	1.72	2.00	
-20 (- 4)	449	113	131	58	0.82	2.55	7.73	1.95	2.27	
-15 (+ 5)	576	145	169	66	0.92	3.29	8.67	2.19	2.54	
-10 (+14)	723	182	212	75	1.03	4.14	9.69	2.44	2.84	

TEST CONDITIONS: @115V1600RPM		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)	134	34	39	36	0.55	0.76	3.75	0.94	1.10	
-30 (-22)	206	52	60	43	0.64	1.17	4.75	1.20	1.39	
-25 (-13)	296	75	87	53	0.75	1.68	5.62	1.42	1.65	
-20 (- 4)	403	102	118	63	0.88	2.30	6.39	1.61	1.87	
-15 (+ 5)	529	133	155	75	1.02	3.02	7.10	1.79	2.08	
-10 (+14)	674	170	197	87	1.18	3.86	7.78	1.96	2.28	

TEST CONDITIONS: @115V2000RPM		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)	240	60	70	44	0.65	1.36	5.45	1.37	1.60	
-30 (-22)	331	83	97	52	0.76	1.87	6.34	1.60	1.86	
-25 (-13)	449	113	132	61	0.87	2.55	7.39	1.86	2.16	
-20 (- 4)	593	150	174	69	0.98	3.38	8.58	2.16	2.52	
-15 (+ 5)	761	192	223	77	1.08	4.34	9.94	2.51	2.91	
-10 (+14)	950	239	278	83	1.16	5.44	11.47	2.89	3.36	

### E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V2000RPM		Static								
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]	
-35 (-31)	223	56	65	44	0.65	1.26	5.08	1.28	1.49	
-30 (-22)	307	77	90	53	0.76	1.74	5.86	1.48	1.72	
-25 (-13)	421	106	123	63	0.89	2.39	6.71	1.69	1.96	
-20 (- 4)	561	141	164	73	1.02	3.19	7.63	1.92	2.24	
-15 (+ 5)	726	183	213	84	1.16	4.15	8.63	2.17	2.53	
-10 (+14)	914	230	268	94	1.29	5.23	9.71	2.45	2.85	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V2000RPM		Static								
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]	
-35 (-31)	179	45	52	44	0.63	1.01	4.08	1.03	1.20	
-30 (-22)	257	65	75	53	0.75	1.46	4.88	1.23	1.43	
-25 (-13)	366	92	107	65	0.90	2.08	5.66	1.43	1.66	
-20 (- 4)	503	127	147	78	1.06	2.86	6.44	1.62	1.89	
-15 (+ 5)	666	168	195	92	1.23	3.80	7.21	1.82	2.11	
-10 (+14)	852	215	250	107	1.41	4.88	7.99	2.01	2.34	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@115V2250RPM		Static								
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]	
-35 (-31)	307	77	90	55	0.78	1.74	5.58	1.41	1.64	
-30 (-22)	410	103	120	64	0.92	2.32	6.41	1.62	1.88	
-25 (-13)	538	136	158	73	1.03	3.05	7.41	1.87	2.17	
-20 (- 4)	692	174	203	81	1.13	3.94	8.57	2.16	2.51	
-15 (+ 5)	873	220	256	88	1.21	4.99	9.88	2.49	2.90	
-10 (+14)	1081	272	317	95	1.29	6.19	11.35	2.86	3.32	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V2250RPM		Static								
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]	
-35 (-31)	277	70	81	56	0.81	1.57	4.96	1.25	1.45	
-30 (-22)	377	95	110	66	0.94	2.14	5.75	1.45	1.68	
-25 (-13)	500	126	146	75	1.06	2.84	6.63	1.67	1.94	
-20 (- 4)	647	163	190	85	1.18	3.68	7.60	1.91	2.23	
-15 (+ 5)	818	206	240	94	1.29	4.67	8.64	2.18	2.53	
-10 (+14)	1014	255	297	104	1.41	5.81	9.75	2.46	2.86	

### E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V2250RPM		Static								
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]	
-35 (-31)	256	64	75	60	0.85	1.45	4.28	1.08	1.25	
-30 (-22)	349	88	102	69	0.97	1.98	5.04	1.27	1.48	
-25 (-13)	464	117	136	80	1.09	2.64	5.81	1.46	1.70	
-20 (- 4)	601	151	176	91	1.22	3.42	6.58	1.66	1.93	
-15 (+ 5)	759	191	222	103	1.37	4.33	7.35	1.85	2.15	
-10 (+14)	939	237	275	116	1.53	5.38	8.11	2.04	2.38	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@115V3000RPM		Static								
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]	
-35 (-31)	385	97	113	73	1.04	2.18	5.26	1.33	1.54	
-30 (-22)	510	128	149	84	1.18	2.89	6.09	1.53	1.78	
-25 (-13)	681	172	200	97	1.34	3.87	7.03	1.77	2.06	
-20 (- 4)	897	226	263	111	1.51	5.11	8.11	2.04	2.38	
-15 (+ 5)	1154	291	338	124	1.67	6.59	9.32	2.35	2.73	
-10 (+14)	1450	365	425	136	1.82	8.31	10.68	2.69	3.13	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V3000RPM		Static								
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]	
-35 (-31)	364	92	107	74	1.07	2.06	4.92	1.24	1.44	
-30 (-22)	490	124	144	87	1.22	2.78	5.65	1.42	1.66	
-25 (-13)	661	167	194	103	1.40	3.75	6.43	1.62	1.88	
-20 (- 4)	873	220	256	120	1.60	4.97	7.28	1.84	2.13	
-15 (+ 5)	1124	283	329	137	1.82	6.41	8.21	2.07	2.41	
-10 (+14)	1409	355	413	153	2.02	8.07	9.22	2.32	2.70	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V3000RPM		Static								
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]	
-35 (-31)	308	78	90	73	1.07	1.74	4.20	1.06	1.23	
-30 (-22)	435	110	127	89	1.22	2.47	4.93	1.24	1.44	
-25 (-13)	604	152	177	107	1.42	3.43	5.66	1.43	1.66	
-20 (- 4)	811	204	238	127	1.65	4.61	6.40	1.61	1.87	
-15 (+ 5)	1053	265	309	147	1.90	6.01	7.15	1.80	2.10	
-10 (+14)	1328	335	389	168	2.16	7.61	7.94	2.00	2.33	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V4500RPM		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)	508	128	149	108	1.48	2.88	4.72	1.19	1.38	
-30 (-22)	704	177	206	131	1.75	3.99	5.48	1.38	1.61	
-25 (-13)	978	246	287	153	2.02	5.55	6.41	1.62	1.88	
-20 (- 4)	1300	328	381	173	2.26	7.40	7.48	1.89	2.19	
-15 (+ 5)	1641	413	481	189	2.45	9.37	8.67	2.18	2.54	
-10 (+14)	1970	496	577	199	2.55	11.28	9.94	2.50	2.91	

TEST CONDITIONS: @115V4500RPM		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)	483	122	142	110	1.51	2.73	4.36	1.10	1.28	
-30 (-22)	679	171	199	137	1.81	3.85	5.00	1.26	1.47	
-25 (-13)	939	237	275	162	2.10	5.33	5.80	1.46	1.70	
-20 (- 4)	1234	311	362	183	2.35	7.02	6.74	1.70	1.97	
-15 (+ 5)	1534	387	449	198	2.54	8.76	7.77	1.96	2.28	
-10 (+14)	1808	456	530	205	2.63	10.36	8.88	2.24	2.60	

TEST CONDITIONS: @115V4500RPM		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)	427	108	125	110	1.51	2.42	3.91	0.98	1.14	
-30 (-22)	619	156	181	140	1.83	3.51	4.45	1.12	1.30	
-25 (-13)	861	217	252	167	2.13	4.89	5.14	1.29	1.50	
-20 (- 4)	1125	284	330	188	2.39	6.40	5.94	1.50	1.74	
-15 (+ 5)	1380	348	404	202	2.56	7.88	6.85	1.73	2.01	
-10 (+14)	1596	402	468	205	2.63	9.14	7.81	1.97	2.29	

### 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		