

COMPRESSOR DEFINITION

Designation	VEG C6H
Nominal Voltage/Frequency	230 V 46-133 Hz
Engineering Number	513804019

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	230 / 46-133	[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	85 to 140 V	85 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	85 to 140 V	85 to 140 V
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	1/5	[hp]
2 Displacement	6.44	[cm ³] (0.393 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	16.200	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	10.28	[kg] (22.66 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 46-133 Hz 3~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	VCC3 1156 XXXXX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	VCC31156XXXXX	
6 Start winding resistance	12.03	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.03	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	3.30/3.30/3.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	3.30/3.30/3.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	3.30/3.30/3.30	[A] - Measured according to UL 984
11 Approval boards certification	CE - NOM - UKCA - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V1400RPM			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]
317	80	93	52	0.91	1.80	6.12	1.54	1.79

TEST CONDITIONS: @115V1600RPM			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]
330	83	97	56	0.98	1.88	5.88	1.48	1.72

TEST CONDITIONS: @115V2000RPM			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]
430	108	126	73	1.22	2.44	5.88	1.48	1.72

TEST CONDITIONS: @115V3000RPM			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]
654	165	192	111	1.79	3.72	5.88	1.48	1.72

TEST CONDITIONS: @115V4000RPM			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]
849	214	249	149	2.27	4.82	5.71	1.44	1.67

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V1400RPM		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]
-35	(-31)	178	45	52	30	0.52	1.01	5.90	1.49	1.73
-30	(-22)	245	62	72	36	0.56	1.39	6.72	1.69	1.97
-25	(-13)	324	82	95	43	0.67	1.84	7.57	1.91	2.22
-20	(- 4)	422	106	124	49	0.82	2.40	8.55	2.16	2.51
-15	(+ 5)	544	137	159	56	0.97	3.11	9.77	2.46	2.86
-10	(+14)	698	176	205	62	1.10	4.00	11.32	2.85	3.32

TEST CONDITIONS: @115V1400RPM		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]
-35	(-31)	157	40	46	32	0.53	0.89	4.91	1.24	1.44
-30	(-22)	226	57	66	39	0.59	1.28	5.80	1.46	1.70
-25	(-13)	305	77	89	46	0.73	1.73	6.60	1.66	1.93
-20	(- 4)	399	101	117	54	0.89	2.27	7.40	1.87	2.17
-15	(+ 5)	516	130	151	62	1.07	2.95	8.31	2.09	2.43
-10	(+14)	661	167	194	70	1.21	3.79	9.41	2.37	2.76

TEST CONDITIONS: @115V1400RPM		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]
-35	(-31)	129	32	38	33	0.65	0.73	3.90	0.98	1.14
-30	(-22)	204	51	60	40	0.72	1.16	4.97	1.25	1.46
-25	(-13)	285	72	84	49	0.86	1.62	5.81	1.46	1.70
-20	(- 4)	379	96	111	58	1.04	2.16	6.53	1.64	1.91
-15	(+ 5)	493	124	144	69	1.23	2.81	7.21	1.82	2.11
-10	(+14)	632	159	185	79	1.39	3.62	7.96	2.01	2.33

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]
-35	(-31)	200	50	59	35	0.50	1.13	5.67	1.43	1.66
-30	(-22)	279	70	82	42	0.66	1.58	6.56	1.65	1.92
-25	(-13)	372	94	109	49	0.82	2.11	7.52	1.89	2.20
-20	(- 4)	482	121	141	56	0.97	2.74	8.60	2.17	2.52
-15	(+ 5)	611	154	179	62	1.10	3.49	9.88	2.49	2.89
-10	(+14)	763	192	223	67	1.18	4.37	11.41	2.88	3.34

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V1600RPM		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)	181	46	53	36	0.59	1.02	4.98	1.26	1.46	
-30 (-22)	253	64	74	44	0.74	1.43	5.78	1.46	1.69	
-25 (-13)	340	86	100	52	0.90	1.93	6.55	1.65	1.92	
-20 (- 4)	446	112	131	60	1.06	2.54	7.37	1.86	2.16	
-15 (+ 5)	574	145	168	69	1.21	3.28	8.30	2.09	2.43	
-10 (+14)	726	183	213	77	1.33	4.16	9.42	2.37	2.76	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V1600RPM		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)	149	38	44	37	0.61	0.84	4.03	1.01	1.18	
-30 (-22)	214	54	63	44	0.75	1.21	4.88	1.23	1.43	
-25 (-13)	297	75	87	53	0.92	1.68	5.63	1.42	1.65	
-20 (- 4)	400	101	117	63	1.10	2.27	6.35	1.60	1.86	
-15 (+ 5)	526	133	154	74	1.28	3.00	7.10	1.79	2.08	
-10 (+14)	679	171	199	85	1.44	3.89	7.95	2.00	2.33	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°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)	258	65	76	45	0.63	1.46	5.73	1.44	1.68	
-30 (-22)	349	88	102	52	0.70	1.98	6.63	1.67	1.94	
-25 (-13)	458	115	134	61	0.86	2.60	7.53	1.90	2.21	
-20 (- 4)	592	149	173	69	1.06	3.37	8.53	2.15	2.50	
-15 (+ 5)	755	190	221	78	1.26	4.31	9.72	2.45	2.85	
-10 (+14)	954	240	280	85	1.43	5.47	11.19	2.82	3.28	

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)	235	59	69	47	0.67	1.33	5.05	1.27	1.48	
-30 (-22)	324	82	95	55	0.78	1.84	5.86	1.48	1.72	
-25 (-13)	430	108	126	65	0.96	2.44	6.60	1.66	1.93	
-20 (- 4)	557	140	163	76	1.17	3.17	7.36	1.86	2.16	
-15 (+ 5)	712	179	209	86	1.38	4.06	8.24	2.08	2.42	
-10 (+14)	899	227	264	96	1.54	5.15	9.33	2.35	2.73	

E - PERFORMANCE - CURVES

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)	189	48	55	48	0.80	1.07	3.96	1.00	1.16	
-30 (-22)	281	71	82	58	0.94	1.59	4.86	1.22	1.42	
-25 (-13)	387	98	113	69	1.15	2.20	5.61	1.41	1.64	
-20 (- 4)	512	129	150	81	1.38	2.91	6.31	1.59	1.85	
-15 (+ 5)	662	167	194	94	1.59	3.78	7.05	1.78	2.07	
-10 (+14)	842	212	247	106	1.76	4.82	7.93	2.00	2.32	

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)	387	98	113	68	0.92	2.19	5.67	1.43	1.66	
-30 (-22)	520	131	152	82	1.21	2.95	6.38	1.61	1.87	
-25 (-13)	675	170	198	94	1.47	3.83	7.19	1.81	2.11	
-20 (- 4)	865	218	253	106	1.70	4.92	8.16	2.06	2.39	
-15 (+ 5)	1103	278	323	118	1.90	6.30	9.33	2.35	2.73	
-10 (+14)	1405	354	412	130	2.07	8.05	10.74	2.71	3.15	

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)	359	90	105	74	1.08	2.03	4.83	1.22	1.42	
-30 (-22)	492	124	144	88	1.36	2.79	5.60	1.41	1.64	
-25 (-13)	641	162	188	101	1.61	3.64	6.37	1.61	1.87	
-20 (- 4)	821	207	240	114	1.84	4.67	7.20	1.81	2.11	
-15 (+ 5)	1045	263	306	129	2.05	5.96	8.12	2.05	2.38	
-10 (+14)	1327	334	389	144	2.23	7.60	9.17	2.31	2.69	

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)	289	73	85	74	1.14	1.63	3.89	0.98	1.14	
-30 (-22)	437	110	128	90	1.41	2.47	4.81	1.21	1.41	
-25 (-13)	596	150	175	106	1.67	3.38	5.62	1.42	1.65	
-20 (- 4)	782	197	229	123	1.91	4.45	6.39	1.61	1.87	
-15 (+ 5)	1007	254	295	141	2.13	5.75	7.16	1.80	2.10	
-10 (+14)	1286	324	377	162	2.33	7.37	7.96	2.01	2.33	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V4000RPM		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)	524	132	154	90	1.37	2.96	5.77	1.45	1.69	
-30 (-22)	673	170	197	111	1.62	3.81	6.18	1.56	1.81	
-25 (-13)	912	230	267	133	1.94	5.18	6.87	1.73	2.01	
-20 (- 4)	1217	307	357	155	2.28	6.93	7.83	1.97	2.29	
-15 (+ 5)	1564	394	458	173	2.60	8.93	9.03	2.28	2.65	
-10 (+14)	1929	486	565	185	2.86	11.05	10.47	2.64	3.07	

TEST CONDITIONS: @115V4000RPM		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)	432	109	127	93	1.43	2.44	4.66	1.17	1.37	
-30 (-22)	601	151	176	114	1.66	3.40	5.34	1.35	1.57	
-25 (-13)	846	213	248	138	1.98	4.80	6.10	1.54	1.79	
-20 (- 4)	1143	288	335	164	2.34	6.51	6.93	1.75	2.03	
-15 (+ 5)	1469	370	430	187	2.70	8.39	7.82	1.97	2.29	
-10 (+14)	1799	453	527	206	3.01	10.31	8.75	2.21	2.56	

TEST CONDITIONS: @115V4000RPM		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)	305	77	89	94	1.64	1.72	3.23	0.81	0.95	
-30 (-22)	495	125	145	115	1.85	2.81	4.33	1.09	1.27	
-25 (-13)	748	189	219	140	2.16	4.25	5.32	1.34	1.56	
-20 (- 4)	1040	262	305	168	2.54	5.92	6.18	1.56	1.81	
-15 (+ 5)	1347	339	395	196	2.94	7.69	6.91	1.74	2.03	
-10 (+14)	1644	414	482	221	3.31	9.42	7.49	1.89	2.19	

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	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-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		