

COMPRESSOR DEFINITION

Designation	VEG Z11C
Nominal Voltage/Frequency	230 V 53-120 Hz
Engineering Number	513802006

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	230 / 53-120	[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	187 to 255 V	187 to 255 V
8.2 LBP (43°C Ambient temperature)	Static	187 to 255 V	187 to 255 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	11.14	[cm ³] (0.680 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	21.000	
3 Lubricant charge	430	[ml] (14.54 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	10.99	[kg] (24.23 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 53-120 Hz 3 ~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	VCC32456XXXX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	VCC32456XXXXX	
6 Start winding resistance	8.06	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	8.06	[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	CCC - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V2000RPM			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]
449	113	132	70	0.58	1.41	6.39	1.61	1.87

TEST CONDITIONS: @220V3600RPM			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	134	1.05	2.67	6.33	1.60	1.85

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1600RPM			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)	229	58	67	36	0.32	0.72	6.31	1.59	1.85
-30 (-22)	303	76	89	42	0.37	0.95	7.19	1.81	2.11
-25 (-13)	395	99	116	48	0.41	1.24	8.24	2.08	2.41
-20 (- 4)	508	128	149	54	0.47	1.60	9.45	2.38	2.77
-15 (+ 5)	646	163	189	60	0.52	2.03	10.82	2.73	3.17
-10 (+14)	813	205	238	66	0.56	2.56	12.35	3.11	3.62

TEST CONDITIONS: @220V1600RPM			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)	207	52	61	38	0.33	0.65	5.50	1.39	1.61
-30 (-22)	283	71	83	46	0.39	0.89	6.19	1.56	1.81
-25 (-13)	375	94	110	53	0.45	1.18	7.02	1.77	2.06
-20 (- 4)	486	123	142	61	0.51	1.53	7.99	2.01	2.34
-15 (+ 5)	621	156	182	68	0.57	1.95	9.09	2.29	2.66
-10 (+14)	782	197	229	76	0.63	2.47	10.31	2.60	3.02

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1600RPM		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)	192	48	56	39	0.34	0.60	4.84	1.22	1.42	
-30 (-22)	263	66	77	48	0.40	0.82	5.43	1.37	1.59	
-25 (-13)	348	88	102	57	0.47	1.09	6.13	1.55	1.80	
-20 (- 4)	451	114	132	65	0.55	1.42	6.94	1.75	2.03	
-15 (+ 5)	575	145	169	73	0.62	1.81	7.85	1.98	2.30	
-10 (+14)	724	182	212	82	0.70	2.28	8.87	2.23	2.60	

TEST CONDITIONS: @220V2000RPM		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)	269	68	79	43	0.37	0.84	6.26	1.58	1.84	
-30 (-22)	388	98	114	52	0.44	1.22	7.32	1.85	2.15	
-25 (-13)	516	130	151	61	0.52	1.62	8.46	2.13	2.48	
-20 (- 4)	660	166	193	68	0.58	2.07	9.69	2.44	2.84	
-15 (+ 5)	824	208	241	75	0.65	2.59	11.03	2.78	3.23	
-10 (+14)	1011	255	296	81	0.70	3.19	12.49	3.15	3.66	

TEST CONDITIONS: @220V2000RPM		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)	236	59	69	44	0.39	0.74	5.44	1.37	1.59	
-30 (-22)	333	84	97	53	0.45	1.04	6.25	1.57	1.83	
-25 (-13)	446	112	131	63	0.53	1.40	7.12	1.79	2.09	
-20 (- 4)	582	147	170	72	0.60	1.83	8.09	2.04	2.37	
-15 (+ 5)	743	187	218	81	0.68	2.34	9.16	2.31	2.68	
-10 (+14)	936	236	274	90	0.75	2.95	10.35	2.61	3.03	

TEST CONDITIONS: @220V2000RPM		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)	239	60	70	48	0.41	0.75	4.94	1.25	1.45	
-30 (-22)	312	79	91	56	0.47	0.98	5.58	1.41	1.63	
-25 (-13)	408	103	120	65	0.54	1.28	6.27	1.58	1.84	
-20 (- 4)	533	134	156	76	0.62	1.67	7.06	1.78	2.07	
-15 (+ 5)	690	174	202	87	0.71	2.17	7.94	2.00	2.33	
-10 (+14)	885	223	259	99	0.81	2.79	8.94	2.25	2.62	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3600RPM		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)	510	129	150	87	0.73	1.60	5.87	1.48	1.72	
-30 (-22)	673	170	197	98	0.81	2.11	6.85	1.73	2.01	
-25 (-13)	870	219	255	112	0.91	2.73	7.77	1.96	2.28	
-20 (- 4)	1106	279	324	127	1.03	3.47	8.71	2.20	2.55	
-15 (+ 5)	1388	350	407	142	1.15	4.37	9.80	2.47	2.87	
-10 (+14)	1721	434	504	155	1.27	5.43	11.12	2.80	3.26	

TEST CONDITIONS: @220V3600RPM		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)	476	120	140	91	0.76	1.49	5.25	1.32	1.54	
-30 (-22)	643	162	188	104	0.86	2.01	6.14	1.55	1.80	
-25 (-13)	836	211	245	121	0.98	2.62	6.92	1.74	2.03	
-20 (- 4)	1062	268	311	138	1.11	3.34	7.69	1.94	2.25	
-15 (+ 5)	1326	334	389	155	1.24	4.18	8.56	2.16	2.51	
-10 (+14)	1634	412	479	170	1.36	5.15	9.63	2.43	2.82	

TEST CONDITIONS: @220V3600RPM		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)	446	113	131	96	0.76	1.40	4.69	1.18	1.37	
-30 (-22)	614	155	180	111	0.88	1.93	5.55	1.40	1.63	
-25 (-13)	802	202	235	128	1.02	2.52	6.27	1.58	1.84	
-20 (- 4)	1015	256	297	146	1.16	3.19	6.94	1.75	2.03	
-15 (+ 5)	1259	317	369	164	1.31	3.96	7.66	1.93	2.24	
-10 (+14)	1538	388	451	180	1.44	4.85	8.54	2.15	2.50	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +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	Slanted 60° up / 40° + 35°		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		