

COMPRESSOR DEFINITION

Designation	VEG Z11C
Nominal Voltage/Frequency	230 V 53-120 Hz
Engineering Number	513802031

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	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	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 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	VCC31156XXXX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	VCC31156XXXXX	
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	CE - UKCA - UL - VDE	

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]	
388	98	114	60	1.06	1.22	6.51	1.64	1.91	

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]	
449	113	132	70	1.28	1.41	6.39	1.61	1.87	

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]	
849	214	249	134	2.31	2.67	6.33	1.60	1.85	

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]
-35	(-31)	236	59	69	36	0.61	0.74	6.62	1.67	1.94
-30	(-22)	293	74	86	42	0.69	0.92	7.13	1.80	2.09
-25	(-13)	371	94	109	47	0.79	1.16	7.91	1.99	2.32
-20	(- 4)	480	121	141	54	0.89	1.51	8.94	2.25	2.62
-15	(+ 5)	628	158	184	61	1.00	1.98	10.22	2.58	3.00
-10	(+14)	826	208	242	70	1.09	2.61	11.73	2.96	3.44

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]
-35	(-31)	230	58	68	39	0.64	0.72	5.88	1.48	1.72
-30	(-22)	292	73	85	46	0.73	0.91	6.32	1.59	1.85
-25	(-13)	367	92	107	53	0.84	1.15	7.00	1.76	2.05
-20	(- 4)	465	117	136	59	0.97	1.46	7.88	1.99	2.31
-15	(+ 5)	597	150	175	67	1.10	1.88	8.96	2.26	2.63
-10	(+14)	771	194	226	75	1.21	2.43	10.22	2.57	2.99

E - PERFORMANCE - CURVES

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)	215	54	63	41	0.65	0.67	5.28	1.33	1.55	
-30 (-22)	284	72	83	49	0.75	0.89	5.70	1.44	1.67	
-25 (-13)	360	91	106	57	0.89	1.13	6.31	1.59	1.85	
-20 (- 4)	453	114	133	64	1.04	1.42	7.08	1.78	2.07	
-15 (+ 5)	572	144	168	72	1.20	1.80	8.00	2.02	2.34	
-10 (+14)	727	183	213	80	1.34	2.29	9.05	2.28	2.65	

TEST CONDITIONS: @100V1600RPM		ASHRAE32 Static			(Condensing temperature 65°C (+149°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	40	0.65	0.59	4.72	1.19	1.38	
-30 (-22)	269	68	79	51	0.79	0.84	5.16	1.30	1.51	
-25 (-13)	350	88	103	60	0.95	1.10	5.73	1.44	1.68	
-20 (- 4)	441	111	129	69	1.13	1.39	6.43	1.62	1.88	
-15 (+ 5)	552	139	162	77	1.31	1.74	7.23	1.82	2.12	
-10 (+14)	691	174	203	86	1.49	2.18	8.12	2.05	2.38	

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)	287	72	84	44	0.72	0.90	6.53	1.65	1.91	
-30 (-22)	360	91	105	51	0.85	1.13	7.01	1.77	2.06	
-25 (-13)	462	116	135	59	0.98	1.45	7.82	1.97	2.29	
-20 (- 4)	594	150	174	67	1.11	1.87	8.91	2.24	2.61	
-15 (+ 5)	755	190	221	74	1.22	2.38	10.24	2.58	3.00	
-10 (+14)	946	238	277	81	1.32	2.98	11.78	2.97	3.45	

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)	266	67	78	47	0.74	0.83	5.73	1.44	1.68	
-30 (-22)	339	85	99	55	0.87	1.06	6.18	1.56	1.81	
-25 (-13)	442	111	129	64	1.01	1.39	6.91	1.74	2.02	
-20 (- 4)	574	145	168	72	1.16	1.80	7.87	1.98	2.31	
-15 (+ 5)	735	185	215	81	1.30	2.31	9.03	2.28	2.65	
-10 (+14)	926	233	271	90	1.44	2.92	10.35	2.61	3.03	

E - PERFORMANCE - CURVES

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)	256	65	75	49	0.77	0.80	5.29	1.33	1.55	
-30 (-22)	326	82	96	57	0.90	1.02	5.70	1.44	1.67	
-25 (-13)	425	107	125	67	1.04	1.33	6.34	1.60	1.86	
-20 (- 4)	554	140	162	77	1.20	1.74	7.16	1.80	2.10	
-15 (+ 5)	712	179	209	87	1.37	2.24	8.13	2.05	2.38	
-10 (+14)	899	226	263	98	1.54	2.84	9.20	2.32	2.70	

TEST CONDITIONS: @100V2000RPM		ASHRAE32 Static			(Condensing temperature 65°C (+149°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)	249	63	73	49	0.81	0.78	5.03	1.27	1.47	
-30 (-22)	312	79	91	58	0.93	0.98	5.38	1.36	1.58	
-25 (-13)	404	102	118	69	1.07	1.27	5.91	1.49	1.73	
-20 (- 4)	525	132	154	80	1.24	1.65	6.57	1.66	1.93	
-15 (+ 5)	676	170	198	93	1.42	2.13	7.33	1.85	2.15	
-10 (+14)	856	216	251	105	1.61	2.70	8.15	2.05	2.39	

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)	497	125	146	88	1.40	1.56	5.59	1.41	1.64	
-30 (-22)	617	155	181	101	1.54	1.93	6.18	1.56	1.81	
-25 (-13)	793	200	232	113	1.74	2.49	7.03	1.77	2.06	
-20 (- 4)	1022	257	299	126	1.97	3.21	8.12	2.05	2.38	
-15 (+ 5)	1299	327	381	138	2.22	4.09	9.40	2.37	2.76	
-10 (+14)	1622	409	475	150	2.44	5.11	10.84	2.73	3.18	

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)	477	120	140	93	1.44	1.49	5.18	1.30	1.52	
-30 (-22)	607	153	178	106	1.61	1.90	5.73	1.44	1.68	
-25 (-13)	788	199	231	121	1.85	2.47	6.49	1.64	1.90	
-20 (- 4)	1017	256	298	136	2.11	3.20	7.43	1.87	2.18	
-15 (+ 5)	1290	325	378	151	2.39	4.06	8.50	2.14	2.49	
-10 (+14)	1602	404	469	166	2.63	5.05	9.67	2.44	2.83	

E - PERFORMANCE - CURVES

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)	460	116	135	96	1.48	1.44	4.83	1.22	1.42
-30	(-22)	595	150	174	111	1.67	1.87	5.35	1.35	1.57
-25	(-13)	777	196	228	128	1.93	2.44	6.02	1.52	1.77
-20	(- 4)	1001	252	293	146	2.21	3.15	6.81	1.72	1.99
-15	(+ 5)	1264	319	370	164	2.50	3.98	7.67	1.93	2.25
-10	(+14)	1561	393	457	183	2.75	4.93	8.56	2.16	2.51

TEST CONDITIONS: @100V3600RPM		ASHRAE32 Static			(Condensing temperature 65°C (+149°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)	445	112	130	97	1.52	1.39	4.55	1.15	1.33
-30	(-22)	581	147	170	116	1.72	1.82	5.03	1.27	1.47
-25	(-13)	759	191	222	135	1.99	2.38	5.61	1.41	1.64
-20	(- 4)	973	245	285	157	2.27	3.06	6.24	1.57	1.83
-15	(+ 5)	1221	308	358	178	2.55	3.85	6.88	1.73	2.02
-10	(+14)	1498	378	439	200	2.80	4.73	7.51	1.89	2.20

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	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		