

COMPRESSOR DEFINITION

Designation	VEG Y11C
Nominal Voltage/Frequency	230 V 53-120 Hz
Engineering Number	513800031

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	198 to 265 V	198 to 265 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 265 V	198 to 265 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	MINERAL / ISO10	
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	9.50	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	9.50	[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	VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V1600RPM			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]	
370	93	108	60	0.48	1.16	6.22	1.57	1.82	

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]	
455	115	133	74	0.58	1.43	6.12	1.54	1.79	

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]	
835	210	245	145	1.07	2.62	5.77	1.45	1.69	

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)	207	52	61	39	-	45.23	0.65	5.31	1.34	1.56
-30	(-22)	285	72	84	45	-	67.23	0.89	6.34	1.60	1.86
-25	(-13)	375	95	110	51	-	80.07	1.18	7.40	1.87	2.17
-20	(- 4)	482	121	141	56	-	35.99	1.51	8.56	2.16	2.51
-15	(+ 5)	609	153	178	62	-	22.32	1.92	9.86	2.49	2.89
-10	(+14)	762	192	223	67	-	52.15	2.40	11.37	2.87	3.33

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)	183	46	54	41	-	91.44	0.57	4.49	1.13	1.32
-30	(-22)	257	65	75	48	-	186.83	0.81	5.37	1.35	1.57
-25	(-13)	345	87	101	55	-	182.60	1.08	6.27	1.58	1.84
-20	(- 4)	451	114	132	62	-	121.44	1.42	7.23	1.82	2.12
-15	(+ 5)	580	146	170	70	-	46.05	1.83	8.31	2.09	2.44
-10	(+14)	736	185	216	77	-	0.86	2.32	9.58	2.41	2.81

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)	187	47	55	41	- 45.20	0.59	4.50	1.14	1.32	
-30 (-22)	253	64	74	49	67.29	0.79	5.23	1.32	1.53	
-25 (-13)	335	84	98	57	80.16	1.05	5.95	1.50	1.74	
-20 (- 4)	436	110	128	65	36.10	1.37	6.71	1.69	1.97	
-15 (+ 5)	562	142	165	74	- 22.19	1.77	7.57	1.91	2.22	
-10 (+14)	716	181	210	83	- 52.01	2.26	8.58	2.16	2.51	

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)	259	65	76	50	0.39	0.81	5.15	1.30	1.51	
-30 (-22)	355	90	104	57	0.44	1.11	6.18	1.56	1.81	
-25 (-13)	470	118	138	65	0.49	1.47	7.22	1.82	2.12	
-20 (- 4)	606	153	178	73	0.55	1.90	8.32	2.10	2.44	
-15 (+ 5)	765	193	224	80	0.60	2.41	9.53	2.40	2.79	
-10 (+14)	950	239	278	87	0.64	3.00	10.90	2.75	3.20	

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)	228	57	67	51	0.41	0.71	4.46	1.12	1.31	
-30 (-22)	325	82	95	59	0.46	1.02	5.45	1.37	1.60	
-25 (-13)	439	111	129	68	0.52	1.38	6.39	1.61	1.87	
-20 (- 4)	574	145	168	78	0.59	1.80	7.34	1.85	2.15	
-15 (+ 5)	731	184	214	87	0.65	2.30	8.36	2.11	2.45	
-10 (+14)	913	230	268	96	0.71	2.88	9.49	2.39	2.78	

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)	213	54	62	53	0.43	0.67	4.00	1.01	1.17	
-30 (-22)	305	77	89	62	0.49	0.96	4.96	1.25	1.45	
-25 (-13)	414	104	121	71	0.56	1.30	5.81	1.46	1.70	
-20 (- 4)	543	137	159	82	0.63	1.71	6.62	1.67	1.94	
-15 (+ 5)	693	175	203	93	0.71	2.18	7.45	1.88	2.18	
-10 (+14)	868	219	254	104	0.78	2.74	8.34	2.10	2.44	

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]
-35	(-31)	488	123	143	99	0.75	1.53	4.91	1.24	1.44
-30	(-22)	625	157	183	110	0.84	1.96	5.72	1.44	1.68
-25	(-13)	823	207	241	126	0.95	2.58	6.56	1.65	1.92
-20	(- 4)	1072	270	314	143	1.08	3.37	7.46	1.88	2.19
-15	(+ 5)	1359	342	398	161	1.20	4.28	8.44	2.13	2.47
-10	(+14)	1674	422	491	176	1.31	5.28	9.51	2.40	2.79

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]
-35	(-31)	449	113	132	99	0.79	1.41	4.54	1.14	1.33
-30	(-22)	596	150	175	114	0.89	1.87	5.24	1.32	1.54
-25	(-13)	798	201	234	133	1.01	2.50	5.98	1.51	1.75
-20	(- 4)	1043	263	306	153	1.13	3.28	6.78	1.71	1.99
-15	(+ 5)	1321	333	387	173	1.25	4.16	7.65	1.93	2.24
-10	(+14)	1620	408	475	189	1.35	5.11	8.61	2.17	2.52

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]
-35	(-31)	413	104	121	99	0.78	1.29	4.17	1.05	1.22
-30	(-22)	562	142	165	117	0.90	1.76	4.82	1.21	1.41
-25	(-13)	760	192	223	138	1.03	2.39	5.50	1.39	1.61
-20	(- 4)	995	251	292	159	1.16	3.13	6.24	1.57	1.83
-15	(+ 5)	1256	316	368	178	1.28	3.95	7.06	1.78	2.07
-10	(+14)	1531	386	449	193	1.37	4.83	7.97	2.01	2.34

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	Yes		
3 Connectors			
3.1 SUCTION	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted		
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	Slanted		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
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		