

COMPRESSOR DEFINITION

Designation	VEG Y8C
Nominal Voltage/Frequency	230 V 53-133 Hz
Engineering Number	513800036

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	230 / 53-133	[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	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	1/5	[hp]
2 Displacement	7.95	[cm ³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
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)	10.93	[kg] (24.10 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 53-133 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	7.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.60	[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]	
260	66	76	42	0.34	0.82	6.21	1.56	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]	
310	78	91	52	0.42	0.97	6.00	1.51	1.76	

TEST CONDITIONS: @220V3000RPM			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]	
490	123	144	83	0.65	1.54	5.89	1.48	1.73	

TEST CONDITIONS: @220V4000RPM			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]	
650	164	190	117	0.89	2.04	5.54	1.40	1.62	

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]
-35	(-31)	145	37	42	29	0.25	0.45	4.95	1.25	1.45
-30	(-22)	205	52	60	34	0.28	0.64	6.04	1.52	1.77
-25	(-13)	275	69	81	38	0.31	0.86	7.24	1.82	2.12
-20	(- 4)	355	90	104	42	0.33	1.12	8.54	2.15	2.50
-15	(+ 5)	446	112	131	45	0.35	1.40	9.94	2.51	2.91
-10	(+14)	546	138	160	48	0.37	1.72	11.46	2.89	3.36

E - PERFORMANCE - CURVES

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)	136	34	40	29	0.24	0.43	4.68	1.18	1.37
-30	(-22)	189	48	55	34	0.28	0.59	5.58	1.41	1.63
-25	(-13)	254	64	74	39	0.32	0.80	6.54	1.65	1.92
-20	(- 4)	331	83	97	44	0.35	1.04	7.58	1.91	2.22
-15	(+ 5)	420	106	123	48	0.38	1.32	8.69	2.19	2.55
-10	(+14)	522	131	153	53	0.41	1.65	9.88	2.49	2.90

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)	122	31	36	28	0.24	0.38	4.28	1.08	1.26
-30	(-22)	170	43	50	34	0.29	0.53	5.06	1.27	1.48
-25	(-13)	233	59	68	40	0.33	0.73	5.86	1.48	1.72
-20	(- 4)	309	78	91	46	0.37	0.97	6.71	1.69	1.97
-15	(+ 5)	399	101	117	52	0.41	1.26	7.60	1.92	2.23
-10	(+14)	505	127	148	59	0.45	1.59	8.54	2.15	2.50

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)	190	48	56	37	0.30	0.59	5.11	1.29	1.50
-30	(-22)	258	65	76	43	0.34	0.81	5.96	1.50	1.75
-25	(-13)	340	86	100	49	0.38	1.07	7.00	1.76	2.05
-20	(- 4)	438	110	128	54	0.41	1.38	8.19	2.06	2.40
-15	(+ 5)	553	139	162	58	0.44	1.74	9.53	2.40	2.79
-10	(+14)	687	173	201	63	0.47	2.17	11.02	2.78	3.23

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)	170	43	50	37	0.30	0.53	4.61	1.16	1.35
-30	(-22)	230	58	67	43	0.35	0.72	5.33	1.34	1.56
-25	(-13)	306	77	90	49	0.39	0.96	6.20	1.56	1.82
-20	(- 4)	399	101	117	55	0.43	1.25	7.22	1.82	2.12
-15	(+ 5)	512	129	150	61	0.47	1.61	8.38	2.11	2.45
-10	(+14)	646	163	189	67	0.50	2.04	9.66	2.43	2.83

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@220V2000RPM		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)	162	41	47	37	0.30	0.51	4.41	1.11	1.29	
-30 (-22)	213	54	62	43	0.36	0.67	4.97	1.25	1.46	
-25 (-13)	282	71	83	50	0.41	0.88	5.68	1.43	1.67	
-20 (- 4)	371	93	109	57	0.45	1.16	6.53	1.64	1.91	
-15 (+ 5)	481	121	141	64	0.49	1.51	7.49	1.89	2.19	
-10 (+14)	615	155	180	72	0.54	1.94	8.56	2.16	2.51	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@220V3000RPM		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)	284	72	83	61	0.46	0.89	4.66	1.17	1.36	
-30 (-22)	378	95	111	68	0.52	1.19	5.52	1.39	1.62	
-25 (-13)	485	122	142	75	0.57	1.52	6.45	1.62	1.89	
-20 (- 4)	614	155	180	82	0.61	1.93	7.48	1.88	2.19	
-15 (+ 5)	775	195	227	89	0.65	2.44	8.66	2.18	2.54	
-10 (+14)	980	247	287	97	0.71	3.09	10.06	2.54	2.95	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@220V3000RPM		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)	262	66	77	59	0.44	0.82	4.47	1.13	1.31	
-30 (-22)	355	89	104	67	0.52	1.11	5.25	1.32	1.54	
-25 (-13)	458	115	134	76	0.58	1.44	6.05	1.53	1.77	
-20 (- 4)	584	147	171	84	0.63	1.83	6.93	1.75	2.03	
-15 (+ 5)	741	187	217	93	0.69	2.33	7.93	2.00	2.32	
-10 (+14)	940	237	275	103	0.75	2.97	9.12	2.30	2.67	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@220V3000RPM		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)	253	64	74	61	0.47	0.79	4.17	1.05	1.22	
-30 (-22)	346	87	101	70	0.56	1.08	4.89	1.23	1.43	
-25 (-13)	449	113	132	80	0.63	1.41	5.61	1.41	1.64	
-20 (- 4)	573	144	168	90	0.69	1.80	6.37	1.60	1.87	
-15 (+ 5)	727	183	213	101	0.75	2.29	7.22	1.82	2.12	
-10 (+14)	923	233	271	112	0.81	2.91	8.22	2.07	2.41	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4000RPM		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)	393	99	115	83	0.61	1.23	4.71	1.19	1.38	
-30 (-22)	510	128	149	97	0.72	1.60	5.27	1.33	1.55	
-25 (-13)	650	164	191	108	0.79	2.04	6.07	1.53	1.78	
-20 (- 4)	825	208	242	117	0.84	2.59	7.05	1.78	2.07	
-15 (+ 5)	1043	263	306	127	0.90	3.28	8.19	2.06	2.40	
-10 (+14)	1314	331	385	139	0.98	4.14	9.42	2.38	2.76	

TEST CONDITIONS: @220V4000RPM		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)	332	84	97	79	0.57	1.04	4.21	1.06	1.24	
-30 (-22)	466	117	137	95	0.71	1.46	4.87	1.23	1.43	
-25 (-13)	619	156	181	109	0.80	1.94	5.70	1.44	1.67	
-20 (- 4)	800	202	234	120	0.87	2.51	6.66	1.68	1.95	
-15 (+ 5)	1018	257	298	132	0.94	3.21	7.70	1.94	2.26	
-10 (+14)	1285	324	377	146	1.03	4.05	8.80	2.22	2.58	

TEST CONDITIONS: @220V4000RPM		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)	278	70	81	75	0.57	0.87	3.72	0.94	1.09	
-30 (-22)	428	108	125	95	0.74	1.34	4.44	1.12	1.30	
-25 (-13)	591	149	173	112	0.86	1.86	5.26	1.32	1.54	
-20 (- 4)	777	196	228	127	0.95	2.44	6.15	1.55	1.80	
-15 (+ 5)	995	251	292	141	1.03	3.13	7.07	1.78	2.07	
-10 (+14)	1255	316	368	158	1.12	3.96	7.98	2.01	2.34	

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
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		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		