

COMPRESSOR DEFINITION

Designation	VEG Y7C
Nominal Voltage/Frequency	230 V 53-133 Hz
Engineering Number	513800035

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	7.15	[cm ³] (0.436 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	18.000	
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]	
230	58	67	38	0.31	0.72	6.10	1.54	1.79	

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]	
280	71	82	47	0.39	0.88	5.98	1.51	1.75	

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]	
450	113	132	77	0.59	1.41	5.86	1.48	1.72	

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]	
580	146	170	104	0.80	1.82	5.56	1.40	1.63	

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)	114	29	33	26	0.21	0.36	4.37	1.10	1.28
-30	(-22)	175	44	51	29	0.24	0.55	5.93	1.50	1.74
-25	(-13)	238	60	70	33	0.27	0.75	7.25	1.83	2.12
-20	(- 4)	308	78	90	36	0.29	0.97	8.48	2.14	2.49
-15	(+ 5)	389	98	114	40	0.31	1.22	9.82	2.47	2.88
-10	(+14)	487	123	143	43	0.33	1.54	11.43	2.88	3.35

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)	94	24	28	26	0.21	0.29	3.61	0.91	1.06
-30	(-22)	161	41	47	30	0.25	0.50	5.26	1.32	1.54
-25	(-13)	228	57	67	35	0.29	0.72	6.56	1.65	1.92
-20	(- 4)	301	76	88	39	0.32	0.94	7.69	1.94	2.25
-15	(+ 5)	383	96	112	43	0.35	1.21	8.83	2.23	2.59
-10	(+14)	480	121	141	47	0.38	1.51	10.15	2.56	2.97

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)	79	20	23	25	0.22	0.25	3.12	0.79	0.91
-30	(-22)	144	36	42	30	0.26	0.45	4.70	1.18	1.38
-25	(-13)	207	52	61	36	0.30	0.65	5.83	1.47	1.71
-20	(- 4)	274	69	80	41	0.34	0.86	6.71	1.69	1.96
-15	(+ 5)	349	88	102	47	0.38	1.10	7.49	1.89	2.19
-10	(+14)	436	110	128	52	0.42	1.38	8.35	2.10	2.45

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)	160	40	47	34	0.28	0.50	4.72	1.19	1.38
-30	(-22)	218	55	64	38	0.31	0.68	5.64	1.42	1.65
-25	(-13)	284	72	83	43	0.34	0.89	6.65	1.68	1.95
-20	(- 4)	365	92	107	47	0.37	1.15	7.82	1.97	2.29
-15	(+ 5)	468	118	137	51	0.39	1.47	9.23	2.32	2.70
-10	(+14)	599	151	175	55	0.42	1.89	10.93	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)	159	40	47	34	0.30	0.50	4.70	1.18	1.38
-30	(-22)	214	54	63	39	0.34	0.67	5.48	1.38	1.61
-25	(-13)	277	70	81	44	0.37	0.87	6.29	1.59	1.84
-20	(- 4)	353	89	103	49	0.40	1.11	7.21	1.82	2.11
-15	(+ 5)	450	113	132	54	0.43	1.42	8.29	2.09	2.43
-10	(+14)	574	145	168	60	0.47	1.81	9.61	2.42	2.82

E - PERFORMANCE - CURVES

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)	138	35	40	34	0.29	0.43	4.10	1.03	1.20	
-30 (-22)	191	48	56	39	0.33	0.60	4.87	1.23	1.43	
-25 (-13)	251	63	73	45	0.37	0.79	5.61	1.41	1.64	
-20 (- 4)	323	81	95	51	0.41	1.01	6.38	1.61	1.87	
-15 (+ 5)	414	104	121	57	0.45	1.30	7.27	1.83	2.13	
-10 (+14)	532	134	156	64	0.50	1.68	8.32	2.10	2.44	

TEST CONDITIONS: @220V3000RPM		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	56	0.44	0.84	4.79	1.21	1.40	
-30 (-22)	347	87	102	62	0.47	1.09	5.58	1.41	1.63	
-25 (-13)	438	110	128	68	0.51	1.37	6.47	1.63	1.90	
-20 (- 4)	551	139	162	74	0.56	1.73	7.51	1.89	2.20	
-15 (+ 5)	697	176	204	79	0.61	2.19	8.77	2.21	2.57	
-10 (+14)	884	223	259	86	0.66	2.79	10.29	2.59	3.02	

TEST CONDITIONS: @220V3000RPM		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)	253	64	74	55	0.47	0.79	4.63	1.17	1.36	
-30 (-22)	336	85	98	63	0.49	1.05	5.32	1.34	1.56	
-25 (-13)	429	108	126	70	0.53	1.35	6.08	1.53	1.78	
-20 (- 4)	543	137	159	78	0.58	1.71	6.96	1.75	2.04	
-15 (+ 5)	686	173	201	85	0.64	2.16	8.03	2.02	2.35	
-10 (+14)	868	219	254	93	0.71	2.74	9.33	2.35	2.73	

TEST CONDITIONS: @220V3000RPM		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)	240	61	70	55	0.56	0.75	4.37	1.10	1.28	
-30 (-22)	322	81	94	65	0.56	1.01	4.95	1.25	1.45	
-25 (-13)	412	104	121	74	0.58	1.29	5.58	1.41	1.64	
-20 (- 4)	519	131	152	83	0.62	1.63	6.31	1.59	1.85	
-15 (+ 5)	654	165	192	91	0.68	2.06	7.19	1.81	2.11	
-10 (+14)	824	208	242	99	0.75	2.60	8.28	2.09	2.43	

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)	330	83	97	75	0.57	1.03	4.39	1.11	1.29	
-30 (-22)	445	112	130	85	0.64	1.39	5.23	1.32	1.53	
-25 (-13)	584	147	171	95	0.71	1.83	6.15	1.55	1.80	
-20 (- 4)	754	190	221	105	0.78	2.37	7.19	1.81	2.11	
-15 (+ 5)	959	242	281	115	0.85	3.02	8.38	2.11	2.45	
-10 (+14)	1206	304	353	124	0.91	3.80	9.75	2.46	2.86	

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)	299	75	88	73	0.59	0.94	4.13	1.04	1.21	
-30 (-22)	417	105	122	84	0.67	1.31	4.93	1.24	1.45	
-25 (-13)	559	141	164	96	0.74	1.75	5.78	1.46	1.69	
-20 (- 4)	729	184	214	108	0.81	2.29	6.71	1.69	1.97	
-15 (+ 5)	934	235	274	120	0.88	2.94	7.75	1.95	2.27	
-10 (+14)	1179	297	346	132	0.95	3.72	8.93	2.25	2.62	

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)	276	70	81	73	0.58	0.86	3.78	0.95	1.11	
-30 (-22)	389	98	114	86	0.67	1.22	4.53	1.14	1.33	
-25 (-13)	524	132	154	99	0.76	1.65	5.29	1.33	1.55	
-20 (- 4)	686	173	201	113	0.85	2.16	6.08	1.53	1.78	
-15 (+ 5)	882	222	258	127	0.94	2.78	6.95	1.75	2.04	
-10 (+14)	1116	281	327	141	1.03	3.52	7.93	2.00	2.32	

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		