COMPRESSOR DEFINITION

Designation	**VEM Y9C**
Nominal Voltage/Frequency	**230 V 53-150 Hz**
Engineering Number	**513900006**

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	230 / 53-150	[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 Expantion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32ºC Ambient temperature)	Static	187 to 255 V	187 to 255 V
8.2 LBP (43ºC Ambient temperature)	Static	187 to 255 V	187 to 255 V
8.3 HBP (32ºC Ambient temperature)	-	-	-
8.4 HBP (43ºC Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm²] (98 psig)	/ ºC - ºF
9.2 Peak	7.8	[kgf/cm²] (111 psig)	/ ºC - ºF
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	9.34	[cm³] (0.570 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	17.600	
3 Lubricant charge	220	[ml] (7.44 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	MINERAL / ISO10	
4 Weight (with oil charge)	7.59	[kg] (16.73 lb.)
5 Nitrogen charge	-	[kgf/cm²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 53-150 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	16.07	[Ω at 25ºC (77ºF)] +/- 8%
7 Run winding resistance	16.07	[Ω at 25ºC (77ºF)] +/- 8%
8 LRA - Locked rotor amperage (53/15 Hz)	2.10/2.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (53/15 Hz)	2.10/2.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (53/15 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	CCC - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **@220V1600RPM**			**CECOMAFLBP** **Static**		Evaporating temperature (Condensing temperature		**-25°C (-13°F)** **55°C (131°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]
259	65	76	55	0.45	0.99	4.73	1.19	1.39

TEST CONDITIONS: **@220V2000RPM**			**CECOMAFLBP** **Static**		Evaporating temperature (Condensing temperature		**-25°C (-13°F)** **55°C (131°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]
293	74	86	63	0.51	1.12	4.69	1.18	1.37

TEST CONDITIONS: **@220V3000RPM**			**CECOMAFLBP** **Static**		Evaporating temperature (Condensing temperature		**-25°C (-13°F)** **55°C (131°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]
447	113	131	98	0.76	1.70	4.58	1.15	1.34

TEST CONDITIONS: **@220V4500RPM**			**CECOMAFLBP** **Static**		Evaporating temperature (Condensing temperature		**-25°C (-13°F)** **55°C (131°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]
600	151	176	137	1.04	2.29	4.37	1.10	1.28

E - PERFORMANCE - CURVES

TEST CONDITIONS: **@220V1600RPM**		**CECOMAF** **Static**			(Condensing temperature **35ºC (+95ºF))**					
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)**	188	47	55	37	0.27	0.60	5.09	1.28	1.49
-30	**(-22)**	261	66	76	42	0.33	0.84	6.20	1.56	1.82
-25	**(-13)**	348	88	102	47	0.35	1.12	7.43	1.87	2.18
-20	**(- 4)**	450	113	132	52	0.35	1.45	8.72	2.20	2.56
-15	**(+ 5)**	569	143	167	57	0.38	1.83	10.01	2.52	2.93
-10	**(+14)**	705	178	207	63	0.46	2.28	11.24	2.83	3.29

E - PERFORMANCE - CURVES

TEST CONDITIONS: **CECOMAF** (Condensing temperature **45ºC (+113ºF))**
@220V1600RPM **Static**

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	36	0.24	0.59	4.80	1.21	1.41
-30	**(-22)**	231	58	68	43	0.37	0.80	5.40	1.36	1.58
-25	**(-13)**	305	77	89	50	0.45	1.06	6.13	1.55	1.80
-20	**(- 4)**	393	99	115	57	0.52	1.37	6.95	1.75	2.04
-15	**(+ 5)**	496	125	145	64	0.61	1.73	7.79	1.96	2.28
-10	**(+14)**	615	155	180	71	0.75	2.15	8.60	2.17	2.52

TEST CONDITIONS: **CECOMAF** (Condensing temperature **55ºC (+131ºF))**
@220V1600RPM **Static**

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)**	135	34	40	37	0.32	0.51	3.68	0.93	1.08
-30	**(-22)**	188	47	55	46	0.41	0.72	4.04	1.02	1.18
-25	**(-13)**	253	64	74	55	0.45	0.96	4.56	1.15	1.34
-20	**(- 4)**	329	83	96	63	0.47	1.26	5.19	1.31	1.52
-15	**(+ 5)**	419	106	123	72	0.50	1.61	5.87	1.48	1.72
-10	**(+14)**	525	132	154	81	0.59	2.01	6.54	1.65	1.92

TEST CONDITIONS: **CECOMAF** (Condensing temperature **35ºC (+95ºF))**
@220V2000RPM **Static**

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	47	0.40	0.69	4.60	1.16	1.35
-30	**(-22)**	303	76	89	50	0.44	0.97	6.03	1.52	1.77
-25	**(-13)**	406	102	119	55	0.46	1.30	7.33	1.85	2.15
-20	**(- 4)**	526	132	154	62	0.46	1.69	8.53	2.15	2.50
-15	**(+ 5)**	662	167	194	68	0.47	2.13	9.68	2.44	2.84
-10	**(+14)**	815	205	239	75	0.49	2.63	10.82	2.73	3.17

TEST CONDITIONS: **CECOMAF** (Condensing temperature **45ºC (+113ºF))**
@220V2000RPM **Static**

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	46	0.36	0.72	4.53	1.14	1.33
-30	**(-22)**	277	70	81	51	0.44	0.96	5.42	1.37	1.59
-25	**(-13)**	361	91	106	58	0.50	1.25	6.22	1.57	1.82
-20	**(- 4)**	461	116	135	66	0.55	1.61	6.96	1.75	2.04
-15	**(+ 5)**	577	145	169	75	0.60	2.02	7.70	1.94	2.25
-10	**(+14)**	711	179	208	84	0.68	2.49	8.47	2.13	2.48

E - PERFORMANCE - CURVES

TEST CONDITIONS: **CECOMAF** (Condensing temperature **55ºC (+131ºF))**
@220V2000RPM **Static**

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)**	163	41	48	46	0.38	0.62	3.58	0.90	1.05
-30	**(-22)**	221	56	65	53	0.45	0.84	4.20	1.06	1.23
-25	**(-13)**	295	74	86	62	0.50	1.12	4.77	1.20	1.40
-20	**(- 4)**	384	97	112	72	0.56	1.47	5.33	1.34	1.56
-15	**(+ 5)**	489	123	143	82	0.62	1.87	5.93	1.49	1.74
-10	**(+14)**	612	154	179	92	0.70	2.35	6.60	1.66	1.93

TEST CONDITIONS: **CECOMAF** (Condensing temperature **35ºC (+95ºF))**
@220V3000RPM **Static**

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)**	339	85	99	69	0.56	1.09	4.91	1.24	1.44
-30	**(-22)**	466	117	136	79	0.64	1.50	5.92	1.49	1.74
-25	**(-13)**	612	154	179	88	0.70	1.97	6.95	1.75	2.04
-20	**(- 4)**	781	197	229	98	0.74	2.51	7.96	2.01	2.33
-15	**(+ 5)**	976	246	286	109	0.78	3.14	8.92	2.25	2.61
-10	**(+14)**	1200	302	352	123	0.83	3.87	9.78	2.46	2.87

TEST CONDITIONS: **CECOMAF** (Condensing temperature **45ºC (+113ºF))**
@220V3000RPM **Static**

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)**	303	76	89	68	0.53	1.05	4.46	1.12	1.31
-30	**(-22)**	405	102	119	80	0.63	1.41	5.10	1.29	1.50
-25	**(-13)**	527	133	154	91	0.73	1.83	5.82	1.47	1.70
-20	**(- 4)**	672	169	197	103	0.81	2.34	6.56	1.65	1.92
-15	**(+ 5)**	843	213	247	116	0.90	2.94	7.30	1.84	2.14
-10	**(+14)**	1044	263	306	131	0.99	3.65	7.99	2.01	2.34

TEST CONDITIONS: **CECOMAF** (Condensing temperature **55ºC (+131ºF))**
@220V3000RPM **Static**

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)**	252	63	74	69	0.55	0.96	3.63	0.92	1.06
-30	**(-22)**	337	85	99	83	0.65	1.28	4.04	1.02	1.18
-25	**(-13)**	443	112	130	97	0.75	1.69	4.56	1.15	1.34
-20	**(- 4)**	572	144	168	111	0.84	2.19	5.16	1.30	1.51
-15	**(+ 5)**	727	183	213	125	0.94	2.79	5.81	1.46	1.70
-10	**(+14)**	912	230	267	141	1.06	3.50	6.46	1.63	1.89

E - PERFORMANCE - CURVES

TEST CONDITIONS: **CECOMAF** (Condensing temperature **35ºC (+95ºF))**
@220V4500RPM **Static**

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)**	482	121	141	99	0.78	1.54	4.88	1.23	1.43
-30	**(-22)**	611	154	179	111	0.88	1.95	5.53	1.39	1.62
-25	**(-13)**	783	197	229	125	0.98	2.51	6.26	1.58	1.83
-20	**(- 4)**	987	249	289	140	1.08	3.17	7.05	1.78	2.07
-15	**(+ 5)**	1214	306	356	153	1.17	3.92	7.91	1.99	2.32
-10	**(+14)**	1454	367	426	165	1.24	4.70	8.84	2.23	2.59

TEST CONDITIONS: **CECOMAF** (Condensing temperature **45ºC (+113ºF))**
@220V4500RPM **Static**

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)**	426	107	125	99	0.78	1.48	4.22	1.06	1.24
-30	**(-22)**	542	137	159	114	0.89	1.88	4.75	1.20	1.39
-25	**(-13)**	694	175	203	131	1.00	2.42	5.31	1.34	1.56
-20	**(- 4)**	871	220	255	148	1.12	3.04	5.91	1.49	1.73
-15	**(+ 5)**	1064	268	312	163	1.22	3.72	6.54	1.65	1.92
-10	**(+14)**	1262	318	370	175	1.30	4.42	7.21	1.82	2.11

TEST CONDITIONS: **CECOMAF** (Condensing temperature **55ºC (+131ºF))**
@220V4500RPM **Static**

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)**	342	86	100	102	0.78	1.30	3.40	0.86	1.00
-30	**(-22)**	465	117	136	118	0.91	1.77	3.97	1.00	1.16
-25	**(-13)**	617	156	181	136	1.03	2.35	4.54	1.14	1.33
-20	**(- 4)**	787	198	231	153	1.15	3.00	5.11	1.29	1.50
-15	**(+ 5)**	965	243	283	169	1.26	3.69	5.69	1.43	1.67
-10	**(+14)**	1141	287	334	182	1.36	4.37	6.28	1.58	1.84

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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 12° out + 79° up		
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 parallet BP+24°to Back		
3.3 PROCESS	6 +0.08/-0.08	[mm]	(0.236" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 42º up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		