COMPRESSOR DEFINITION

Designation	**VEM Y7C**
Nominal Voltage/Frequency	**230 V 53-150 Hz**
Engineering Number	**513900008**

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	198 to 265 V	198 to 265 V
8.2 LBP (43ºC Ambient temperature)	Static	198 to 265 V	198 to 265 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	7.23	[cm³] (0.441 cu.in)
2.1 Bore [mm]	24.000	
2.2 Stroke [mm]	16.000	
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]
184	46	54	40	0.35	0.70	4.60	1.16	1.35

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]
224	56	66	49	0.40	0.85	4.55	1.15	1.33

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]
341	86	100	73	0.59	1.30	4.67	1.18	1.37

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]
513	129	150	118	0.83	1.96	4.34	1.09	1.27

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)**	141	36	41	27	0.24	0.45	5.16	1.30	1.51
-30	**(-22)**	187	47	55	31	0.28	0.60	6.13	1.55	1.80
-25	**(-13)**	239	60	70	34	0.30	0.77	7.08	1.78	2.07
-20	**(- 4)**	302	76	88	37	0.33	0.97	8.10	2.04	2.37
-15	**(+ 5)**	382	96	112	41	0.35	1.23	9.32	2.35	2.73
-10	**(+14)**	486	122	142	44	0.37	1.56	10.85	2.73	3.18

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)**	96	24	28	27	0.24	0.33	3.58	0.90	1.05
-30	**(-22)**	144	36	42	31	0.28	0.50	4.55	1.15	1.33
-25	**(-13)**	195	49	57	36	0.32	0.68	5.40	1.36	1.58
-20	**(- 4)**	254	64	74	41	0.35	0.89	6.22	1.57	1.82
-15	**(+ 5)**	327	82	96	46	0.38	1.14	7.14	1.80	2.09
-10	**(+14)**	420	106	123	51	0.42	1.47	8.26	2.08	2.42

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)**	68	17	20	27	0.23	0.26	2.47	0.62	0.72
-30	**(-22)**	118	30	35	34	0.28	0.45	3.44	0.87	1.01
-25	**(-13)**	167	42	49	40	0.33	0.63	4.19	1.05	1.23
-20	**(- 4)**	221	56	65	46	0.37	0.84	4.81	1.21	1.41
-15	**(+ 5)**	286	72	84	53	0.42	1.10	5.43	1.37	1.59
-10	**(+14)**	368	93	108	60	0.48	1.41	6.15	1.55	1.80

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)**	163	41	48	34	0.30	0.52	4.80	1.21	1.41
-30	**(-22)**	234	59	69	39	0.35	0.75	5.98	1.51	1.75
-25	**(-13)**	306	77	90	43	0.38	0.99	7.10	1.79	2.08
-20	**(- 4)**	385	97	113	47	0.40	1.24	8.23	2.07	2.41
-15	**(+ 5)**	479	121	140	51	0.43	1.54	9.43	2.38	2.76
-10	**(+14)**	593	149	174	55	0.45	1.91	10.79	2.72	3.16

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)**	129	32	38	34	0.29	0.45	3.78	0.95	1.11
-30	**(-22)**	191	48	56	40	0.34	0.67	4.74	1.20	1.39
-25	**(-13)**	255	64	75	45	0.38	0.89	5.63	1.42	1.65
-20	**(- 4)**	325	82	95	50	0.42	1.13	6.49	1.64	1.90
-15	**(+ 5)**	410	103	120	55	0.45	1.43	7.41	1.87	2.17
-10	**(+14)**	514	130	151	61	0.49	1.80	8.44	2.13	2.47

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)**	98	25	29	34	0.29	0.37	2.94	0.74	0.86
-30	**(-22)**	153	38	45	41	0.34	0.58	3.72	0.94	1.09
-25	**(-13)**	207	52	61	47	0.39	0.79	4.38	1.10	1.28
-20	**(- 4)**	269	68	79	54	0.44	1.03	5.01	1.26	1.47
-15	**(+ 5)**	344	87	101	61	0.49	1.32	5.65	1.42	1.66
-10	**(+14)**	439	111	129	68	0.55	1.69	6.40	1.61	1.87

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)**	252	64	74	52	0.44	0.81	4.82	1.22	1.41
-30	**(-22)**	342	86	100	60	0.50	1.10	5.75	1.45	1.69
-25	**(-13)**	452	114	132	67	0.55	1.45	6.81	1.72	1.99
-20	**(- 4)**	585	147	171	74	0.59	1.88	7.97	2.01	2.34
-15	**(+ 5)**	748	188	219	81	0.64	2.41	9.24	2.33	2.71
-10	**(+14)**	945	238	277	89	0.69	3.05	10.61	2.67	3.11

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)**	194	49	57	52	0.42	0.67	3.70	0.93	1.08
-30	**(-22)**	273	69	80	60	0.49	0.95	4.51	1.14	1.32
-25	**(-13)**	367	93	108	68	0.55	1.28	5.39	1.36	1.58
-20	**(- 4)**	481	121	141	76	0.61	1.68	6.32	1.59	1.85
-15	**(+ 5)**	618	156	181	84	0.68	2.16	7.30	1.84	2.14
-10	**(+14)**	785	198	230	94	0.75	2.75	8.33	2.10	2.44

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)**	158	40	46	53	0.44	0.60	2.98	0.75	0.87
-30	**(-22)**	234	59	69	63	0.51	0.89	3.69	0.93	1.08
-25	**(-13)**	319	80	94	72	0.57	1.21	4.42	1.11	1.30
-20	**(- 4)**	419	106	123	82	0.64	1.60	5.15	1.30	1.51
-15	**(+ 5)**	539	136	158	92	0.71	2.06	5.87	1.48	1.72
-10	**(+14)**	683	172	200	104	0.81	2.62	6.58	1.66	1.93

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)**	365	92	107	79	0.63	1.17	4.61	1.16	1.35
-30	**(-22)**	487	123	143	88	0.69	1.56	5.54	1.40	1.62
-25	**(-13)**	639	161	187	97	0.76	2.05	6.58	1.66	1.93
-20	**(- 4)**	818	206	240	106	0.82	2.63	7.70	1.94	2.26
-15	**(+ 5)**	1025	258	300	115	0.89	3.30	8.89	2.24	2.60
-10	**(+14)**	1259	317	369	124	0.96	4.06	10.11	2.55	2.96

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)**	303	76	89	80	0.62	1.05	3.78	0.95	1.11
-30	**(-22)**	406	102	119	91	0.70	1.41	4.51	1.14	1.32
-25	**(-13)**	535	135	157	101	0.79	1.86	5.31	1.34	1.56
-20	**(- 4)**	687	173	201	111	0.87	2.40	6.18	1.56	1.81
-15	**(+ 5)**	862	217	253	122	0.96	3.01	7.09	1.79	2.08
-10	**(+14)**	1060	267	311	132	1.04	3.71	8.01	2.02	2.35

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)**	244	61	71	79	0.63	0.93	3.08	0.78	0.90
-30	**(-22)**	340	86	100	92	0.72	1.29	3.69	0.93	1.08
-25	**(-13)**	456	115	134	105	0.81	1.74	4.35	1.10	1.27
-20	**(- 4)**	593	149	174	117	0.90	2.26	5.05	1.27	1.48
-15	**(+ 5)**	747	188	219	130	0.99	2.86	5.76	1.45	1.69
-10	**(+14)**	920	232	270	143	1.09	3.53	6.46	1.63	1.89

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		