

COMPRESSOR DEFINITION

Designation	VEM T11C
Nominal Voltage/Frequency	230 V 40-150 Hz
Engineering Number	513906162

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	230 / 40-150	[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 Expansion device	Capillary tube		
8 Compressor cooling		Operating voltage range	
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	187 to 255 V	187 to 255 V
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation		[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	210	[ml] (7.10 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	6.75	[kg] (14.88 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm ²] (2.84 to 4.27 psig)

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 40-150 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		[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance		[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (40/150 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (40/150 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (40/150 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V1200RPM			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]
263	66	77	51	0.40	0.83	5.19	1.31	1.52

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]
358	90	105	64	0.49	1.12	5.63	1.42	1.65

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]
454	114	133	77	0.60	1.43	5.87	1.48	1.72

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]
676	170	198	113	0.87	2.12	6.01	1.51	1.76

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]
843	212	247	147	1.13	2.65	5.73	1.44	1.68

TEST CONDITIONS: @220V4300RPM			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]
901	227	264	164	1.23	2.83	5.49	1.38	1.61

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1200RPM		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)	162	41	48	27	0.24	0.51	5.94	1.50	1.74
-30	(-22)	215	54	63	32	0.28	0.67	6.63	1.67	1.94
-25	(-13)	279	70	82	38	0.31	0.87	7.38	1.86	2.16
-20	(- 4)	356	90	104	44	0.35	1.12	8.23	2.07	2.41
-15	(+ 5)	449	113	132	49	0.39	1.41	9.20	2.32	2.70
-10	(+14)	559	141	164	54	0.43	1.76	10.31	2.60	3.02

TEST CONDITIONS: @220V1200RPM		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)	145	37	43	29	0.25	0.45	5.03	1.27	1.47
-30	(-22)	197	50	58	35	0.29	0.62	5.63	1.42	1.65
-25	(-13)	260	66	76	42	0.34	0.82	6.21	1.57	1.82
-20	(- 4)	336	85	99	49	0.39	1.06	6.81	1.72	2.00
-15	(+ 5)	428	108	125	57	0.45	1.35	7.45	1.88	2.18
-10	(+14)	535	135	157	65	0.51	1.69	8.16	2.06	2.39

TEST CONDITIONS: @220V1200RPM		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)	130	33	38	30	0.26	0.41	4.27	1.08	1.25
-30	(-22)	179	45	53	37	0.30	0.56	4.84	1.22	1.42
-25	(-13)	240	61	70	45	0.36	0.75	5.32	1.34	1.56
-20	(- 4)	314	79	92	55	0.43	0.99	5.73	1.44	1.68
-15	(+ 5)	402	101	118	66	0.51	1.27	6.10	1.54	1.79
-10	(+14)	506	128	148	78	0.61	1.60	6.46	1.63	1.89

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)	217	55	64	36	0.30	0.68	6.10	1.54	1.79
-30	(-22)	290	73	85	42	0.35	0.91	6.85	1.73	2.01
-25	(-13)	378	95	111	49	0.40	1.19	7.66	1.93	2.24
-20	(- 4)	481	121	141	57	0.44	1.51	8.53	2.15	2.50
-15	(+ 5)	601	151	176	64	0.49	1.89	9.48	2.39	2.78
-10	(+14)	738	186	216	70	0.55	2.33	10.52	2.65	3.08

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)	196	50	58	37	0.31	0.62	5.29	1.33	1.55
-30	(-22)	267	67	78	45	0.36	0.84	5.92	1.49	1.73
-25	(-13)	353	89	103	54	0.42	1.11	6.57	1.66	1.93
-20	(- 4)	456	115	134	63	0.49	1.43	7.25	1.83	2.12
-15	(+ 5)	577	146	169	72	0.56	1.82	7.97	2.01	2.34
-10	(+14)	718	181	210	82	0.63	2.26	8.75	2.20	2.56

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)	176	44	52	38	0.31	0.55	4.61	1.16	1.35
-30	(-22)	242	61	71	47	0.38	0.76	5.15	1.30	1.51
-25	(-13)	325	82	95	58	0.45	1.02	5.67	1.43	1.66
-20	(- 4)	426	107	125	69	0.54	1.34	6.18	1.56	1.81
-15	(+ 5)	547	138	160	82	0.63	1.72	6.70	1.69	1.96
-10	(+14)	688	173	202	95	0.73	2.17	7.24	1.82	2.12

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)	274	69	80	45	0.36	0.86	6.11	1.54	1.79
-30	(-22)	362	91	106	53	0.42	1.13	6.82	1.72	2.00
-25	(-13)	470	118	138	62	0.48	1.47	7.63	1.92	2.24
-20	(- 4)	600	151	176	70	0.55	1.89	8.53	2.15	2.50
-15	(+ 5)	756	190	221	79	0.61	2.38	9.52	2.40	2.79
-10	(+14)	937	236	275	88	0.68	2.96	10.61	2.67	3.11

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)	252	63	74	47	0.37	0.79	5.44	1.37	1.59
-30	(-22)	339	85	99	56	0.44	1.06	6.04	1.52	1.77
-25	(-13)	446	112	131	67	0.52	1.40	6.68	1.68	1.96
-20	(- 4)	575	145	169	78	0.60	1.81	7.38	1.86	2.16
-15	(+ 5)	728	184	213	89	0.69	2.29	8.13	2.05	2.38
-10	(+14)	907	229	266	102	0.78	2.86	8.92	2.25	2.61

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)	223	56	65	47	0.38	0.70	4.75	1.20	1.39	
-30 (-22)	309	78	91	58	0.46	0.97	5.30	1.34	1.55	
-25 (-13)	415	105	122	71	0.55	1.30	5.86	1.48	1.72	
-20 (- 4)	542	137	159	85	0.65	1.70	6.42	1.62	1.88	
-15 (+ 5)	692	174	203	99	0.76	2.18	6.98	1.76	2.05	
-10 (+14)	867	219	254	115	0.89	2.74	7.55	1.90	2.21	

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)	400	101	117	69	0.54	1.25	5.83	1.47	1.71	
-30 (-22)	540	136	158	82	0.63	1.69	6.56	1.65	1.92	
-25 (-13)	704	177	206	96	0.74	2.21	7.32	1.84	2.14	
-20 (- 4)	899	227	263	111	0.86	2.82	8.14	2.05	2.39	
-15 (+ 5)	1131	285	331	125	0.99	3.56	9.07	2.29	2.66	
-10 (+14)	1405	354	412	138	1.11	4.43	10.14	2.56	2.97	

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)	361	91	106	70	0.55	1.13	5.19	1.31	1.52	
-30 (-22)	500	126	146	85	0.66	1.57	5.86	1.48	1.72	
-25 (-13)	662	167	194	102	0.79	2.08	6.49	1.64	1.90	
-20 (- 4)	854	215	250	119	0.94	2.68	7.13	1.80	2.09	
-15 (+ 5)	1081	272	317	138	1.10	3.40	7.80	1.97	2.29	
-10 (+14)	1350	340	395	158	1.26	4.26	8.56	2.16	2.51	

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)	328	83	96	71	0.56	1.03	4.65	1.17	1.36	
-30 (-22)	464	117	136	87	0.68	1.45	5.35	1.35	1.57	
-25 (-13)	623	157	182	105	0.82	1.95	5.95	1.50	1.74	
-20 (- 4)	810	204	237	125	0.98	2.54	6.48	1.63	1.90	
-15 (+ 5)	1031	260	302	148	1.15	3.25	6.99	1.76	2.05	
-10 (+14)	1293	326	379	172	1.33	4.08	7.52	1.90	2.20	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4300RPM		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)	549	138	161	103	0.78	1.72	5.33	1.34	1.56	
-30 (-22)	710	179	208	117	0.88	2.23	6.03	1.52	1.77	
-25 (-13)	904	228	265	134	1.01	2.84	6.72	1.69	1.97	
-20 (- 4)	1133	286	332	153	1.15	3.56	7.42	1.87	2.17	
-15 (+ 5)	1400	353	410	172	1.29	4.41	8.16	2.06	2.39	
-10 (+14)	1709	431	501	191	1.42	5.39	8.96	2.26	2.62	

TEST CONDITIONS: @220V4300RPM		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)	511	129	150	105	0.80	1.60	4.84	1.22	1.42	
-30 (-22)	676	170	198	124	0.94	2.12	5.44	1.37	1.59	
-25 (-13)	872	220	255	145	1.11	2.73	6.01	1.51	1.76	
-20 (- 4)	1101	278	323	167	1.30	3.46	6.59	1.66	1.93	
-15 (+ 5)	1369	345	401	190	1.49	4.31	7.21	1.82	2.11	
-10 (+14)	1676	422	491	213	1.66	5.29	7.88	1.99	2.31	

TEST CONDITIONS: @220V4300RPM		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)	466	118	137	106	0.82	1.46	4.41	1.11	1.29	
-30 (-22)	637	160	187	129	0.98	2.00	4.93	1.24	1.44	
-25 (-13)	836	211	245	154	1.17	2.62	5.41	1.36	1.59	
-20 (- 4)	1069	269	313	181	1.39	3.36	5.90	1.49	1.73	
-15 (+ 5)	1338	337	392	208	1.61	4.21	6.42	1.62	1.88	
-10 (+14)	1646	415	482	235	1.81	5.19	7.00	1.76	2.05	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal
2 Tray holder	Yes
3 Connectors	
3.1 SUCTION	6.2 +0.05/+0.05 [mm] (0.244" +0.002"/+0.002")
3.1.1 Material	Copper
3.1.2 Shape	Slanted 40° up + 0° to Back
3.2 DISCHARGE	4.9 +0.10/-0.05 [mm] (0.193" +0.004"/-0.002")
3.2.1 Material	Copper
3.2.2 Shape	Slanted 10° up + 24° to Back
3.3 PROCESS	6.2 +0.05/+0.05 [mm] (0.244" +0.002"/+0.002")
3.3.1 Material	Copper
3.3.2 Shape	Slanted 40° up + 45° to Back
3.4 Oil cooler (Copper)	No [mm]
3.5 Connector sealing	Rubber Plugs