

COMPRESSOR DEFINITION

Designation	VEG T11HB
Nominal Voltage/Frequency	230 V 60-150 Hz
Engineering Number	513800042

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	230 / 60-150	[V / Hz]	
4 Application type	Low-Medium Back Pressure		
4.1 Evaporating temperature range	-35°C to -5°C	(-31°F to 23°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)	Fan	103 to 140 V	103 to 140 V
8.2 LBP (43°C Ambient temperature)	Fan	103 to 140 V	103 to 140 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	14.2	[kgf/cm ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/2	[hp]
2 Displacement	10.61	[cm ³] (0.647 cu.in)
2.1 Bore [mm]	26.000	
2.2 Stroke [mm]	20.000	
3 Lubricant charge	430	[ml] (14.54 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO22	
4 Weight (with oil charge)	10	[kg] (22.05 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 60-150 Hz 3 ~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	VCCMP1156XXX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	VCCMP1156 XX XX	
6 Start winding resistance	6.40	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	6.40	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	3.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	3.30	[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	UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V1800RPM			ASHRAELBP32 Fan		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]
653	165	191	115	1.49	3.71	5.70	1.44	1.67

TEST CONDITIONS: @115V2500RPM			ASHRAELBP32 Fan		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]
907	229	266	160	2.01	5.15	5.68	1.43	1.66

TEST CONDITIONS: @115V3000RPM			ASHRAELBP32 Fan		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]
1100	277	322	194	2.44	6.25	5.67	1.43	1.66

TEST CONDITIONS: @115V3600RPM			ASHRAELBP32 Fan		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]
1289	325	378	232	2.83	7.32	5.55	1.40	1.63

TEST CONDITIONS: @115V4500RPM			ASHRAELBP32 Fan		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]
1463	369	429	279	3.36	8.31	5.24	1.32	1.54

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V1800RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	298	75	87	69	0.88	1.69	4.37	1.10	1.28
-30	(-22)	472	119	138	83	1.08	2.67	5.54	1.40	1.62
-25	(-13)	651	164	191	100	1.28	3.70	6.46	1.63	1.89
-20	(- 4)	852	215	250	118	1.47	4.85	7.26	1.83	2.13
-15	(+ 5)	1090	275	320	135	1.66	6.22	8.11	2.04	2.38
-10	(+14)	1380	348	404	151	1.85	7.91	9.14	2.30	2.68
-5	(+23)	1737	438	509	165	2.02	9.99	10.50	2.65	3.08

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V1800RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	270	68	79	68	0.87	1.53	3.93	0.99	1.15
-30	(-22)	425	107	125	85	1.09	2.41	4.91	1.24	1.44
-25	(-13)	590	149	173	105	1.33	3.35	5.63	1.42	1.65
-20	(- 4)	781	197	229	126	1.56	4.44	6.24	1.57	1.83
-15	(+ 5)	1013	255	297	148	1.80	5.78	6.87	1.73	2.01
-10	(+14)	1300	328	381	169	2.03	7.45	7.69	1.94	2.25
-5	(+23)	1659	418	486	188	2.27	9.54	8.83	2.23	2.59

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@115V1800RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	211	53	62	66	0.85	1.20	3.19	0.80	0.94
-30	(-22)	354	89	104	86	1.09	2.00	4.11	1.04	1.20
-25	(-13)	511	129	150	108	1.34	2.90	4.75	1.20	1.39
-20	(- 4)	697	176	204	133	1.61	3.97	5.28	1.33	1.55
-15	(+ 5)	929	234	272	159	1.88	5.30	5.83	1.47	1.71
-10	(+14)	1220	308	358	184	2.16	6.99	6.56	1.65	1.92
-5	(+23)	1587	400	465	209	2.45	9.13	7.61	1.92	2.23

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V2500RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	465	117	136	97	1.23	2.63	4.77	1.20	1.40
-30	(-22)	667	168	195	119	1.48	3.78	5.60	1.41	1.64
-25	(-13)	911	230	267	142	1.73	5.17	6.43	1.62	1.88
-20	(- 4)	1205	304	353	166	1.99	6.86	7.29	1.84	2.14
-15	(+ 5)	1556	392	456	190	2.26	8.88	8.21	2.07	2.40
-10	(+14)	1969	496	577	214	2.51	11.28	9.21	2.32	2.70
-5	(+23)	2454	618	719	238	2.75	14.11	10.31	2.60	3.02

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V2500RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	398	100	117	98	1.23	2.25	4.10	1.03	1.20
-30	(-22)	580	146	170	120	1.50	3.29	4.84	1.22	1.42
-25	(-13)	807	203	236	145	1.79	4.58	5.57	1.40	1.63
-20	(- 4)	1087	274	319	172	2.11	6.19	6.30	1.59	1.85
-15	(+ 5)	1427	360	418	201	2.45	8.15	7.07	1.78	2.07
-10	(+14)	1834	462	537	232	2.79	10.51	7.90	1.99	2.31
-5	(+23)	2314	583	678	263	3.14	13.31	8.81	2.22	2.58

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@115V2500RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	356	90	104	92	1.16	2.01	3.84	0.97	1.12
-30	(-22)	520	131	152	117	1.44	2.95	4.46	1.12	1.31
-25	(-13)	733	185	215	146	1.76	4.16	5.04	1.27	1.48
-20	(- 4)	1002	252	294	179	2.12	5.70	5.61	1.41	1.64
-15	(+ 5)	1334	336	391	215	2.52	7.62	6.18	1.56	1.81
-10	(+14)	1737	438	509	255	2.93	9.95	6.80	1.71	1.99
-5	(+23)	2216	558	649	297	3.37	12.75	7.48	1.88	2.19

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V3000RPM		ASHRAE32 Fan			(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)	563	142	165	120	1.52	3.18	4.69	1.18	1.37
-30	(-22)	781	197	229	145	1.77	4.43	5.38	1.36	1.58
-25	(-13)	1056	266	309	173	2.06	6.00	6.11	1.54	1.79
-20	(- 4)	1399	353	410	202	2.39	7.96	6.91	1.74	2.02
-15	(+ 5)	1822	459	534	233	2.73	10.40	7.81	1.97	2.29
-10	(+14)	2338	589	685	264	3.06	13.39	8.84	2.23	2.59
-5	(+23)	2957	745	866	295	3.36	17.01	10.04	2.53	2.94

TEST CONDITIONS: @115V3000RPM		ASHRAE32 Fan			(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)	529	133	155	120	1.48	2.99	4.38	1.10	1.28
-30	(-22)	732	184	214	146	1.77	4.15	5.01	1.26	1.47
-25	(-13)	985	248	289	177	2.11	5.59	5.62	1.42	1.65
-20	(- 4)	1301	328	381	209	2.49	7.40	6.25	1.58	1.83
-15	(+ 5)	1690	426	495	244	2.89	9.65	6.94	1.75	2.03
-10	(+14)	2165	546	634	280	3.28	12.40	7.72	1.95	2.26
-5	(+23)	2738	690	802	317	3.65	15.75	8.62	2.17	2.53

TEST CONDITIONS: @115V3000RPM		ASHRAE32 Fan			(Condensing temperature 65°C (+149°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	106	1.33	2.22	3.73	0.94	1.09
-30	(-22)	618	156	181	139	1.68	3.50	4.41	1.11	1.29
-25	(-13)	887	223	260	175	2.08	5.03	5.02	1.27	1.47
-20	(- 4)	1211	305	355	215	2.53	6.89	5.61	1.41	1.64
-15	(+ 5)	1604	404	470	258	3.01	9.15	6.20	1.56	1.82
-10	(+14)	2075	523	608	303	3.48	11.89	6.84	1.72	2.00
-5	(+23)	2638	665	773	350	3.94	15.18	7.55	1.90	2.21

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V3600RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	668	168	196	146	1.82	3.78	4.59	1.16	1.35
-30	(-22)	929	234	272	179	2.13	5.27	5.21	1.31	1.53
-25	(-13)	1258	317	369	213	2.48	7.14	5.91	1.49	1.73
-20	(- 4)	1661	419	487	247	2.85	9.45	6.69	1.68	1.96
-15	(+ 5)	2145	541	629	284	3.24	12.25	7.53	1.90	2.21
-10	(+14)	2718	685	796	321	3.64	15.57	8.45	2.13	2.48
-5	(+23)	3386	853	992	360	4.02	19.48	9.42	2.37	2.76

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V3600RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	583	147	171	139	1.70	3.30	4.16	1.05	1.22
-30	(-22)	833	210	244	175	2.08	4.72	4.77	1.20	1.40
-25	(-13)	1151	290	337	214	2.50	6.53	5.42	1.37	1.59
-20	(- 4)	1545	389	453	254	2.95	8.79	6.11	1.54	1.79
-15	(+ 5)	2021	509	592	296	3.41	11.53	6.84	1.72	2.00
-10	(+14)	2586	652	758	340	3.87	14.82	7.60	1.91	2.23
-5	(+23)	3249	819	952	387	4.33	18.69	8.38	2.11	2.45

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@115V3600RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	426	107	125	125	1.53	2.41	3.41	0.86	1.00
-30	(-22)	685	173	201	166	1.99	3.88	4.11	1.03	1.20
-25	(-13)	1013	255	297	210	2.48	5.75	4.81	1.21	1.41
-20	(- 4)	1418	357	416	257	3.01	8.07	5.52	1.39	1.62
-15	(+ 5)	1907	481	559	307	3.55	10.88	6.23	1.57	1.82
-10	(+14)	2487	627	729	360	4.09	14.25	6.93	1.75	2.03
-5	(+23)	3164	797	927	416	4.62	18.20	7.61	1.92	2.23

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V4500RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	772	195	226	174	2.09	4.37	4.42	1.12	1.30
-30	(-22)	1035	261	303	209	2.47	5.87	5.00	1.26	1.47
-25	(-13)	1434	361	420	254	2.96	8.14	5.64	1.42	1.65
-20	(- 4)	1946	490	570	304	3.51	11.08	6.35	1.60	1.86
-15	(+ 5)	2547	642	746	354	4.03	14.54	7.17	1.81	2.10
-10	(+14)	3213	810	942	398	4.47	18.41	8.09	2.04	2.37
-5	(+23)	3922	988	1149	430	4.75	22.56	9.16	2.31	2.68

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V4500RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	645	162	189	168	2.02	3.65	3.87	0.97	1.13
-30	(-22)	917	231	269	207	2.44	5.19	4.51	1.14	1.32
-25	(-13)	1312	331	384	256	2.98	7.45	5.15	1.30	1.51
-20	(- 4)	1808	456	530	309	3.57	10.29	5.84	1.47	1.71
-15	(+ 5)	2380	600	697	362	4.13	13.58	6.57	1.65	1.92
-10	(+14)	3005	757	880	408	4.61	17.21	7.36	1.86	2.16
-5	(+23)	3660	922	1072	442	4.94	21.05	8.25	2.08	2.42

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@115V4500RPM		Fan								
Evaporating temperature		Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE		
		+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	506	128	148	152	1.86	2.86	3.26	0.82	0.96
-30	(-22)	786	198	230	197	2.33	4.45	3.98	1.00	1.17
-25	(-13)	1177	297	345	252	2.92	6.68	4.66	1.17	1.37
-20	(- 4)	1655	417	485	311	3.55	9.42	5.33	1.34	1.56
-15	(+ 5)	2198	554	644	368	4.17	12.54	6.00	1.51	1.76
-10	(+14)	2781	701	815	419	4.70	15.93	6.68	1.68	1.96
-5	(+23)	3381	852	991	456	5.07	19.45	7.41	1.87	2.17

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
3.2 DISCHARGE	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Straight		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		