

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	187 to 255 V	187 to 255 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	CF05D01 N XX XX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	INVERTER CF05D01 N X	
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 (60/150 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60/150 Hz)	-	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60/150 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification		

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]
630	159	185	108	1.44	3.58	5.83	1.47	1.71

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]
876	221	257	151	1.96	4.98	5.80	1.46	1.70

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]
1227	309	360	221	2.75	6.97	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]
1375	347	403	260	3.21	7.81	5.29	1.33	1.55

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V1800RPM			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]
-35	(-31)	308	78	90	66	0.53	1.74	4.70	1.18	1.38
-30	(-22)	449	113	132	81	0.65	2.55	5.54	1.40	1.62
-25	(-13)	620	156	182	97	0.79	3.52	6.40	1.61	1.88
-20	(- 4)	825	208	242	113	0.93	4.70	7.31	1.84	2.14
-15	(+ 5)	1071	270	314	129	1.07	6.11	8.30	2.09	2.43
-10	(+14)	1363	343	399	145	1.20	7.81	9.40	2.37	2.75
-5	(+23)	1706	430	500	160	1.31	9.81	10.63	2.68	3.12

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V1800RPM		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)	279	70	82	67	0.52	1.58	4.20	1.06	1.23
-30	(-22)	405	102	119	83	0.66	2.30	4.89	1.23	1.43
-25	(-13)	563	142	165	101	0.81	3.20	5.59	1.41	1.64
-20	(- 4)	758	191	222	120	0.98	4.31	6.33	1.60	1.86
-15	(+ 5)	995	251	292	139	1.15	5.68	7.14	1.80	2.09
-10	(+14)	1281	323	375	159	1.31	7.34	8.05	2.03	2.36
-5	(+23)	1621	408	475	179	1.45	9.32	9.08	2.29	2.66

TEST CONDITIONS: @115V1800RPM		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)	242	61	71	66	0.53	1.37	3.67	0.92	1.07
-30	(-22)	353	89	103	83	0.68	2.00	4.26	1.07	1.25
-25	(-13)	498	126	146	103	0.85	2.83	4.85	1.22	1.42
-20	(- 4)	682	172	200	125	1.04	3.88	5.47	1.38	1.60
-15	(+ 5)	912	230	267	148	1.23	5.20	6.15	1.55	1.80
-10	(+14)	1192	300	349	172	1.42	6.83	6.91	1.74	2.02
-5	(+23)	1528	385	448	196	1.60	8.79	7.79	1.96	2.28

TEST CONDITIONS: @115V2500RPM		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)	521	131	153	108	0.73	2.95	4.84	1.22	1.42
-30	(-22)	678	171	199	123	0.85	3.84	5.50	1.39	1.61
-25	(-13)	866	218	254	139	0.98	4.92	6.24	1.57	1.83
-20	(- 4)	1093	276	320	155	1.13	6.22	7.07	1.78	2.07
-15	(+ 5)	1367	345	401	171	1.27	7.80	8.01	2.02	2.35
-10	(+14)	1694	427	496	187	1.40	9.70	9.07	2.29	2.66
-5	(+23)	2081	524	610	203	1.52	11.97	10.27	2.59	3.01

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V2500RPM		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)	484	122	142	111	0.82	2.74	4.36	1.10	1.28
-30	(-22)	627	158	184	127	0.96	3.56	4.93	1.24	1.44
-25	(-13)	804	203	236	145	1.11	4.56	5.55	1.40	1.63
-20	(- 4)	1020	257	299	164	1.27	5.81	6.24	1.57	1.83
-15	(+ 5)	1284	324	376	183	1.44	7.33	7.01	1.77	2.05
-10	(+14)	1602	404	469	203	1.60	9.18	7.87	1.98	2.31
-5	(+23)	1981	499	580	224	1.75	11.40	8.86	2.23	2.60

TEST CONDITIONS: @115V2500RPM		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)	423	107	124	121	0.94	2.39	3.48	0.88	1.02
-30	(-22)	556	140	163	138	1.09	3.15	4.03	1.01	1.18
-25	(-13)	722	182	212	157	1.26	4.10	4.60	1.16	1.35
-20	(- 4)	930	234	272	178	1.45	5.29	5.23	1.32	1.53
-15	(+ 5)	1186	299	348	201	1.64	6.77	5.91	1.49	1.73
-10	(+14)	1497	377	439	224	1.84	8.58	6.66	1.68	1.95
-5	(+23)	1871	471	548	249	2.03	10.76	7.50	1.89	2.20

TEST CONDITIONS: @115V3600RPM		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)	625	157	183	141	1.07	3.54	4.42	1.11	1.30
-30	(-22)	890	224	261	169	1.28	5.05	5.27	1.33	1.54
-25	(-13)	1215	306	356	203	1.54	6.90	6.01	1.52	1.76
-20	(- 4)	1611	406	472	240	1.83	9.17	6.72	1.69	1.97
-15	(+ 5)	2091	527	613	281	2.14	11.94	7.45	1.88	2.18
-10	(+14)	2665	672	781	321	2.44	15.27	8.28	2.09	2.43
-5	(+23)	3346	843	980	361	2.71	19.25	9.28	2.34	2.72

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V3600RPM		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)	510	129	149	152	1.13	2.89	3.38	0.85	0.99
-30	(-22)	776	196	228	175	1.30	4.40	4.42	1.12	1.30
-25	(-13)	1100	277	322	207	1.55	6.24	5.30	1.33	1.55
-20	(- 4)	1492	376	437	246	1.84	8.49	6.06	1.53	1.77
-15	(+ 5)	1964	495	576	290	2.17	11.21	6.77	1.71	1.98
-10	(+14)	2529	637	741	336	2.51	14.49	7.51	1.89	2.20
-5	(+23)	3199	806	937	384	2.85	18.40	8.34	2.10	2.44

TEST CONDITIONS: @115V3600RPM		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)	408	103	120	158	1.21	2.31	2.58	0.65	0.75
-30	(-22)	674	170	197	178	1.36	3.82	3.80	0.96	1.11
-25	(-13)	994	250	291	208	1.59	5.64	4.78	1.20	1.40
-20	(- 4)	1380	348	404	248	1.89	7.85	5.57	1.40	1.63
-15	(+ 5)	1845	465	541	296	2.25	10.53	6.24	1.57	1.83
-10	(+14)	2400	605	703	349	2.64	13.75	6.87	1.73	2.01
-5	(+23)	3057	770	896	407	3.04	17.58	7.51	1.89	2.20

TEST CONDITIONS: @115V4500RPM		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)	710	179	208	173	1.55	4.02	4.10	1.03	1.20
-30	(-22)	1006	254	295	204	1.43	5.70	4.95	1.25	1.45
-25	(-13)	1364	344	400	240	1.65	7.75	5.70	1.44	1.67
-20	(- 4)	1789	451	524	279	2.06	10.18	6.43	1.62	1.88
-15	(+ 5)	2285	576	670	318	2.53	13.04	7.19	1.81	2.11
-10	(+14)	2857	720	837	354	2.92	16.37	8.06	2.03	2.36
-5	(+23)	3509	884	1028	385	3.09	20.19	9.11	2.30	2.67

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V4500RPM		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)	587	148	172	181	1.58	3.32	3.25	0.82	0.95
-30	(-22)	890	224	261	209	1.50	5.05	4.26	1.07	1.25
-25	(-13)	1247	314	365	243	1.75	7.08	5.12	1.29	1.50
-20	(- 4)	1661	418	487	282	2.18	9.45	5.87	1.48	1.72
-15	(+ 5)	2137	539	626	324	2.66	12.20	6.60	1.66	1.93
-10	(+14)	2681	676	786	364	3.06	15.36	7.36	1.86	2.16
-5	(+23)	3296	831	966	401	3.23	18.96	8.23	2.07	2.41

TEST CONDITIONS: @115V4500RPM		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)	457	115	134	194	1.73	2.58	2.35	0.59	0.69
-30	(-22)	777	196	228	218	1.66	4.40	3.57	0.90	1.05
-25	(-13)	1141	288	334	251	1.91	6.48	4.55	1.15	1.33
-20	(- 4)	1555	392	456	290	2.34	8.85	5.36	1.35	1.57
-15	(+ 5)	2022	510	592	333	2.81	11.54	6.08	1.53	1.78
-10	(+14)	2547	642	746	377	3.19	14.59	6.76	1.70	1.98
-5	(+23)	3136	790	919	420	3.33	18.04	7.47	1.88	2.19

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		