

COMPRESSOR DEFINITION

Designation	VEG T11HB
Nominal Voltage/Frequency	230 V 60-150 Hz
Engineering Number	513800069

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)	10.55	[kg] (23.26 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	CF10B02 N 0.1 X	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	CF10B02 N 0.1 XX A Y	
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	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]	
666	168	195	115	1.53	3.78	5.80	1.46	1.70	

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]	
916	231	268	160	2.08	5.20	5.71	1.44	1.67	

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]	
1285	324	377	234	3.00	7.30	5.49	1.38	1.61	

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]	
1397	352	409	266	3.36	7.94	5.25	1.32	1.54	

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)	323	81	95	68	0.98	1.83	4.73	1.19	1.39
-30	(-22)	467	118	137	85	1.22	2.65	5.48	1.38	1.61
-25	(-13)	638	161	187	102	1.42	3.62	6.27	1.58	1.84
-20	(- 4)	843	212	247	118	1.60	4.80	7.14	1.80	2.09
-15	(+ 5)	1087	274	318	134	1.76	6.20	8.11	2.04	2.38
-10	(+14)	1376	347	403	149	1.92	7.89	9.23	2.33	2.71
-5	(+23)	1718	433	503	163	2.10	9.88	10.53	2.65	3.08

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)	282	71	83	68	0.98	1.59	4.15	1.04	1.22
-30	(-22)	420	106	123	87	1.23	2.38	4.83	1.22	1.42
-25	(-13)	585	147	171	106	1.45	3.32	5.51	1.39	1.62
-20	(- 4)	783	197	229	126	1.67	4.45	6.22	1.57	1.82
-15	(+ 5)	1020	257	299	146	1.88	5.82	7.00	1.76	2.05
-10	(+14)	1304	329	382	165	2.11	7.47	7.87	1.98	2.30
-5	(+23)	1639	413	480	185	2.37	9.43	8.86	2.23	2.60

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)	240	60	70	69	1.00	1.36	3.45	0.87	1.01
-30	(-22)	369	93	108	88	1.24	2.09	4.18	1.05	1.22
-25	(-13)	524	132	154	108	1.47	2.98	4.86	1.22	1.42
-20	(- 4)	713	180	209	130	1.70	4.06	5.52	1.39	1.62
-15	(+ 5)	941	237	276	152	1.95	5.37	6.19	1.56	1.81
-10	(+14)	1215	306	356	175	2.22	6.96	6.91	1.74	2.03
-5	(+23)	1540	388	451	199	2.54	8.86	7.72	1.94	2.26

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)	468	118	137	91	1.28	2.65	5.14	1.30	1.51
-30	(-22)	652	164	191	118	1.61	3.70	5.56	1.40	1.63
-25	(-13)	881	222	258	143	1.90	5.00	6.16	1.55	1.80
-20	(- 4)	1162	293	340	168	2.17	6.61	6.91	1.74	2.03
-15	(+ 5)	1503	379	440	191	2.42	8.58	7.84	1.98	2.30
-10	(+14)	1914	482	561	214	2.68	10.96	8.95	2.25	2.62
-5	(+23)	2401	605	704	235	2.95	13.81	10.22	2.58	3.00

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)	412	104	121	96	1.35	2.33	4.32	1.09	1.27
-30	(-22)	592	149	174	122	1.68	3.36	4.85	1.22	1.42
-25	(-13)	816	206	239	149	1.98	4.63	5.47	1.38	1.60
-20	(- 4)	1090	275	319	177	2.28	6.20	6.16	1.55	1.81
-15	(+ 5)	1424	359	417	205	2.58	8.13	6.95	1.75	2.04
-10	(+14)	1825	460	535	233	2.90	10.45	7.82	1.97	2.29
-5	(+23)	2301	580	674	262	3.26	13.24	8.78	2.21	2.57

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)	319	80	94	100	1.39	1.81	3.20	0.81	0.94
-30	(-22)	499	126	146	125	1.71	2.83	3.97	1.00	1.16
-25	(-13)	719	181	211	151	2.02	4.08	4.73	1.19	1.39
-20	(- 4)	990	250	290	180	2.34	5.63	5.50	1.39	1.61
-15	(+ 5)	1319	332	386	211	2.68	7.53	6.26	1.58	1.83
-10	(+14)	1713	432	502	244	3.06	9.81	7.03	1.77	2.06
-5	(+23)	2182	550	639	279	3.49	12.55	7.81	1.97	2.29

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)	646	163	189	122	1.65	3.65	5.27	1.33	1.55
-30	(-22)	925	233	271	158	2.19	5.24	5.82	1.47	1.71
-25	(-13)	1257	317	368	200	2.67	7.14	6.31	1.59	1.85
-20	(- 4)	1656	417	485	243	3.12	9.43	6.82	1.72	2.00
-15	(+ 5)	2135	538	626	287	3.55	12.19	7.45	1.88	2.18
-10	(+14)	2706	682	793	327	3.98	15.51	8.26	2.08	2.42
-5	(+23)	3384	853	992	362	4.43	19.47	9.35	2.36	2.74

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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)	526	133	154	132	1.78	2.98	4.02	1.01	1.18
-30	(-22)	809	204	237	168	2.29	4.58	4.77	1.20	1.40
-25	(-13)	1145	288	335	211	2.78	6.50	5.39	1.36	1.58
-20	(- 4)	1548	390	454	259	3.27	8.81	5.97	1.51	1.75
-15	(+ 5)	2031	512	595	307	3.76	11.59	6.61	1.66	1.94
-10	(+14)	2608	657	764	353	4.29	14.94	7.37	1.86	2.16
-5	(+23)	3292	830	965	395	4.87	18.94	8.35	2.11	2.45

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)	405	102	119	140	1.96	2.29	2.88	0.73	0.84
-30	(-22)	672	169	197	175	2.40	3.81	3.81	0.96	1.12
-25	(-13)	994	250	291	218	2.84	5.64	4.57	1.15	1.34
-20	(- 4)	1383	349	405	266	3.30	7.87	5.22	1.32	1.53
-15	(+ 5)	1853	467	543	317	3.80	10.58	5.86	1.48	1.72
-10	(+14)	2418	609	708	367	4.37	13.85	6.58	1.66	1.93
-5	(+23)	3090	779	905	414	5.01	17.77	7.45	1.88	2.18

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)	741	187	217	141	1.87	4.19	5.26	1.32	1.54
-30	(-22)	1021	257	299	189	2.55	5.79	5.48	1.38	1.61
-25	(-13)	1365	344	400	235	3.10	7.75	5.85	1.47	1.71
-20	(- 4)	1781	449	522	278	3.55	10.13	6.40	1.61	1.88
-15	(+ 5)	2276	574	667	316	3.93	12.99	7.16	1.80	2.10
-10	(+14)	2859	720	838	350	4.28	16.38	8.14	2.05	2.39
-5	(+23)	3538	892	1037	377	4.64	20.35	9.39	2.37	2.75

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)	626	158	183	163	2.16	3.54	3.84	0.97	1.13
-30	(-22)	918	231	269	205	2.74	5.20	4.47	1.13	1.31
-25	(-13)	1261	318	369	246	3.21	7.16	5.11	1.29	1.50
-20	(- 4)	1662	419	487	287	3.62	9.46	5.79	1.46	1.70
-15	(+ 5)	2129	537	624	326	4.01	12.15	6.52	1.64	1.91
-10	(+14)	2671	673	783	363	4.40	15.30	7.35	1.85	2.15
-5	(+23)	3295	830	966	398	4.84	18.95	8.29	2.09	2.43

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)	421	106	123	173	2.26	2.38	2.44	0.61	0.71
-30	(-22)	752	189	220	209	2.77	4.26	3.52	0.89	1.03
-25	(-13)	1119	282	328	248	3.22	6.35	4.47	1.13	1.31
-20	(- 4)	1531	386	449	289	3.64	8.72	5.31	1.34	1.56
-15	(+ 5)	1997	503	585	331	4.07	11.40	6.07	1.53	1.78
-10	(+14)	2523	636	739	374	4.55	14.46	6.78	1.71	1.99
-5	(+23)	3119	786	914	417	5.12	17.94	7.46	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	6.5 +0.12/-0.08	[mm]	(0.256" +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		