

### COMPRESSOR DEFINITION

Designation	VEG T7H
Nominal Voltage/Frequency	230 V 53-150 Hz
Engineering Number	513800015

### A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
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 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	198 to 265 V	198 to 265 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 265 V	198 to 265 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 <sup>2</sup> ] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm <sup>2</sup> ] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	7.15	[cm <sup>3</sup> ] (0.436 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	18.000	
3 Lubricant charge	430	[ml] (14.54 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	11.13	[kg] (24.54 lb.)
5 Nitrogen charge	0.2 to 0.3	[kgf/cm <sup>2</sup> ] (2.84 to 4.27 psig)

### 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	EU245607B02/EU245607N00	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	EU245607B02	
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		

### D - PERFORMANCE - CHECK POINT DATA

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]	
345	87	101	66	0.48	1.96	5.22	1.32	1.53	

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]	
730	184	214	132	0.92	4.15	5.53	1.39	1.62	

TEST CONDITIONS: @220V4500RPM			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]	
990	249	290	191	1.31	5.63	5.19	1.31	1.52	

### 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)	156	39	46	39	0.28	0.88	4.08	1.03	1.20	
-30 (-22)	243	61	71	47	0.38	1.38	5.10	1.28	1.49	
-25 (-13)	343	87	101	57	0.47	1.95	5.99	1.51	1.75	
-20 (- 4)	462	116	135	68	0.54	2.63	6.84	1.72	2.01	
-15 (+ 5)	604	152	177	78	0.60	3.45	7.75	1.95	2.27	
-10 (+14)	774	195	227	88	0.65	4.44	8.79	2.22	2.58	

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)	128	32	38	40	0.28	0.73	3.20	0.81	0.94	
-30 (-22)	204	51	60	49	0.38	1.16	4.14	1.04	1.21	
-25 (-13)	294	74	86	60	0.48	1.67	4.94	1.24	1.45	
-20 (- 4)	405	102	119	71	0.56	2.31	5.67	1.43	1.66	
-15 (+ 5)	541	136	159	84	0.65	3.09	6.44	1.62	1.89	
-10 (+14)	707	178	207	96	0.74	4.05	7.33	1.85	2.15	

### E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@220V1600RPM		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)	93	23	27	39	0.28	0.53	2.39	0.60	0.70	
-30 (-22)	157	40	46	49	0.36	0.89	3.26	0.82	0.96	
-25 (-13)	238	60	70	61	0.44	1.35	3.97	1.00	1.16	
-20 (- 4)	341	86	100	74	0.53	1.94	4.60	1.16	1.35	
-15 (+ 5)	471	119	138	89	0.63	2.69	5.25	1.32	1.54	
-10 (+14)	633	159	185	105	0.73	3.62	6.00	1.51	1.76	

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)	346	87	102	81	0.57	1.96	4.26	1.07	1.25	
-30 (-22)	505	127	148	99	0.73	2.86	5.11	1.29	1.50	
-25 (-13)	691	174	202	116	0.87	3.92	5.94	1.50	1.74	
-20 (- 4)	915	231	268	134	0.99	5.21	6.81	1.72	2.00	
-15 (+ 5)	1190	300	349	153	1.11	6.80	7.76	1.96	2.27	
-10 (+14)	1528	385	448	172	1.24	8.76	8.85	2.23	2.59	

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)	296	74	87	79	0.55	1.67	3.74	0.94	1.10	
-30 (-22)	454	114	133	99	0.74	2.57	4.56	1.15	1.34	
-25 (-13)	637	161	187	120	0.90	3.62	5.32	1.34	1.56	
-20 (- 4)	858	216	251	142	1.04	4.88	6.08	1.53	1.78	
-15 (+ 5)	1126	284	330	164	1.18	6.43	6.87	1.73	2.01	
-10 (+14)	1456	367	427	187	1.33	8.34	7.76	1.95	2.27	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°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)	215	54	63	71	0.49	1.22	3.02	0.76	0.88	
-30 (-22)	372	94	109	94	0.70	2.11	3.88	0.98	1.14	
-25 (-13)	551	139	161	118	0.88	3.13	4.64	1.17	1.36	
-20 (- 4)	765	193	224	144	1.05	4.35	5.34	1.35	1.57	
-15 (+ 5)	1025	258	300	170	1.22	5.85	6.04	1.52	1.77	
-10 (+14)	1344	339	394	198	1.40	7.70	6.79	1.71	1.99	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4500RPM		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)	494	124	145	119	0.82	2.79	4.15	1.05	1.22
-30	(-22)	722	182	212	146	1.04	4.09	4.94	1.24	1.45
-25	(-13)	970	244	284	169	1.21	5.51	5.74	1.45	1.68
-20	(- 4)	1258	317	368	191	1.37	7.16	6.57	1.66	1.93
-15	(+ 5)	1606	405	471	214	1.52	9.17	7.47	1.88	2.19
-10	(+14)	2036	513	596	239	1.68	11.66	8.45	2.13	2.48

TEST CONDITIONS: @220V4500RPM		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)	421	106	123	117	0.79	2.38	3.61	0.91	1.06
-30	(-22)	649	163	190	148	1.05	3.68	4.37	1.10	1.28
-25	(-13)	890	224	261	175	1.27	5.05	5.11	1.29	1.50
-20	(- 4)	1165	294	342	201	1.45	6.63	5.85	1.47	1.71
-15	(+ 5)	1496	377	438	227	1.62	8.54	6.61	1.67	1.94
-10	(+14)	1901	479	557	255	1.79	10.89	7.41	1.87	2.17

TEST CONDITIONS: @220V4500RPM		ASHRAE32 Static			(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)	304	77	89	104	0.72	1.72	2.91	0.73	0.85
-30	(-22)	544	137	159	142	1.02	3.08	3.71	0.94	1.09
-25	(-13)	791	199	232	176	1.27	4.49	4.46	1.12	1.31
-20	(- 4)	1067	269	313	207	1.48	6.07	5.17	1.30	1.52
-15	(+ 5)	1391	351	408	239	1.66	7.94	5.87	1.48	1.72
-10	(+14)	1785	450	523	273	1.84	10.23	6.57	1.66	1.92

### F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
2 Tray holder	No		
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		
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		
3.3 PROCESS	6.1 +0.10/+0.00	[mm]	(0.240" +0.004"/+0.000")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		