

### COMPRESSOR DEFINITION

Designation	VEG T7H
Nominal Voltage/Frequency	230 V 53-150 Hz
Engineering Number	513800007

### 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 / ISO22	
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	EU245607N00	
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	67	0.49	1.96	5.13	1.29	1.50	

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	134	0.94	4.15	5.43	1.37	1.59	

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	198	1.36	5.63	4.99	1.26	1.46	

### 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	38	0.29	0.88	4.18	1.05	1.23	
-30	(-22)	243	61	71	47	0.39	1.38	5.09	1.28	1.49	
-25	(-13)	343	87	101	58	0.48	1.95	5.91	1.49	1.73	
-20	(- 4)	462	116	135	69	0.55	2.63	6.72	1.69	1.97	
-15	(+ 5)	604	152	177	80	0.61	3.45	7.60	1.91	2.23	
-10	(+14)	774	195	227	90	0.66	4.44	8.63	2.17	2.53	

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	0.29	0.73	3.17	0.80	0.93	
-30	(-22)	204	51	60	50	0.39	1.16	4.05	1.02	1.19	
-25	(-13)	294	74	86	61	0.49	1.67	4.82	1.22	1.41	
-20	(- 4)	405	102	119	73	0.57	2.31	5.55	1.40	1.63	
-15	(+ 5)	541	136	159	86	0.66	3.09	6.32	1.59	1.85	
-10	(+14)	707	178	207	98	0.74	4.05	7.21	1.82	2.11	

### E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1600RPM		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)	93	23	27	40	0.29	0.53	2.34	0.59	0.69	
-30 (-22)	157	40	46	50	0.37	0.89	3.19	0.81	0.94	
-25 (-13)	238	60	70	62	0.45	1.35	3.90	0.98	1.14	
-20 (- 4)	341	86	100	76	0.54	1.94	4.53	1.14	1.33	
-15 (+ 5)	471	119	138	91	0.64	2.69	5.17	1.30	1.52	
-10 (+14)	633	159	185	106	0.75	3.62	5.91	1.49	1.73	

TEST CONDITIONS: @220V3000RPM		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)	346	87	102	83	0.58	1.96	4.19	1.06	1.23	
-30 (-22)	505	127	148	100	0.75	2.86	5.02	1.27	1.47	
-25 (-13)	691	174	202	118	0.88	3.92	5.84	1.47	1.71	
-20 (- 4)	915	231	268	137	1.01	5.21	6.69	1.69	1.96	
-15 (+ 5)	1190	300	349	156	1.12	6.80	7.63	1.92	2.24	
-10 (+14)	1528	385	448	175	1.25	8.76	8.70	2.19	2.55	

TEST CONDITIONS: @220V3000RPM		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)	296	74	87	81	0.56	1.67	3.68	0.93	1.08	
-30 (-22)	454	114	133	101	0.75	2.57	4.48	1.13	1.31	
-25 (-13)	637	161	187	122	0.92	3.62	5.23	1.32	1.53	
-20 (- 4)	858	216	251	144	1.06	4.88	5.97	1.51	1.75	
-15 (+ 5)	1126	284	330	167	1.21	6.43	6.75	1.70	1.98	
-10 (+14)	1456	367	427	190	1.36	8.34	7.62	1.92	2.23	

TEST CONDITIONS: @220V3000RPM		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)	215	54	63	72	0.48	1.22	2.97	0.75	0.87	
-30 (-22)	372	94	109	96	0.71	2.11	3.81	0.96	1.12	
-25 (-13)	551	139	161	120	0.90	3.13	4.56	1.15	1.34	
-20 (- 4)	765	193	224	146	1.07	4.35	5.25	1.32	1.54	
-15 (+ 5)	1025	258	300	173	1.24	5.85	5.94	1.50	1.74	
-10 (+14)	1344	339	394	201	1.42	7.70	6.68	1.68	1.96	

### 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	124	0.85	2.79	3.99	1.01	1.17
-30	(-22)	722	182	212	152	1.08	4.09	4.75	1.20	1.39
-25	(-13)	970	244	284	176	1.26	5.51	5.52	1.39	1.62
-20	(- 4)	1258	317	368	198	1.42	7.16	6.32	1.59	1.85
-15	(+ 5)	1606	405	471	222	1.58	9.17	7.19	1.81	2.11
-10	(+14)	2036	513	596	249	1.75	11.66	8.13	2.05	2.38

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	121	0.82	2.38	3.47	0.88	1.02
-30	(-22)	649	163	190	154	1.09	3.68	4.21	1.06	1.23
-25	(-13)	890	224	261	182	1.32	5.05	4.92	1.24	1.44
-20	(- 4)	1165	294	342	209	1.50	6.63	5.63	1.42	1.65
-15	(+ 5)	1496	377	438	236	1.68	8.54	6.36	1.60	1.86
-10	(+14)	1901	479	557	265	1.86	10.89	7.13	1.80	2.09

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	108	0.75	1.72	2.80	0.70	0.82
-30	(-22)	544	137	159	148	1.07	3.08	3.57	0.90	1.05
-25	(-13)	791	199	232	183	1.32	4.49	4.29	1.08	1.26
-20	(- 4)	1067	269	313	216	1.53	6.07	4.97	1.25	1.46
-15	(+ 5)	1391	351	408	248	1.73	7.94	5.64	1.42	1.65
-10	(+14)	1785	450	523	283	1.92	10.23	6.32	1.59	1.85

### 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 plated steel		
3.1.2 Shape	Straight		
3.2 DISCHARGE	5 +0.18/-0.06	[mm]	(0.197" +0.007"/-0.002")
3.2.1 Material	Copper plated steel		
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 plated steel		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		