

COMPRESSOR DEFINITION

Designation	VEG T7C
Nominal Voltage/Frequency	230 V 53-133 Hz
Engineering Number	513800018

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	230 / 53-133	[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	187 to 255 V	187 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	187 to 255 V	187 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	7.7	[kgf/cm ²] (109 psig)	/ °C - °F
9.2 Peak (gauge)	9.8	[kgf/cm ²] (139 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/5	[hp]
2 Displacement	7.15	[cm ³] (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	MINERAL / ISO10	
4 Weight (with oil charge)	10.59	[kg] (23.35 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 53-133 Hz 3 ~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	EU245608B02/EU245609N00	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	EU2456 08B 02	
6 Start winding resistance	7.60	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	7.60	[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	VDE	

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]	
204	51	60	39	0.35	0.64	5.20	1.31	1.52	

TEST CONDITIONS: @220V2000RPM			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]	
258	65	76	48	0.41	0.81	5.35	1.35	1.57	

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]	
410	103	120	75	0.60	1.29	5.44	1.37	1.59	

TEST CONDITIONS: @220V4000RPM			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]	
533	134	156	102	0.80	1.67	5.23	1.32	1.53	

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]
-35	(-31)	86	22	25	27	0.22	0.27	3.15	0.79	0.92
-30	(-22)	138	35	40	32	0.27	0.43	4.39	1.11	1.29
-25	(-13)	201	51	59	36	0.32	0.63	5.61	1.41	1.64
-20	(- 4)	274	69	80	40	0.35	0.86	6.81	1.72	2.00
-15	(+ 5)	358	90	105	44	0.38	1.13	7.99	2.01	2.34
-10	(+14)	452	114	132	49	0.40	1.42	9.17	2.31	2.69

E - PERFORMANCE - CURVES

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]
-35	(-31)	61	15	18	26	0.23	0.19	2.31	0.58	0.68
-30	(-22)	117	30	34	32	0.29	0.37	3.62	0.91	1.06
-25	(-13)	180	45	53	38	0.33	0.57	4.79	1.21	1.40
-20	(- 4)	249	63	73	43	0.38	0.78	5.82	1.47	1.71
-15	(+ 5)	323	81	95	48	0.41	1.02	6.72	1.69	1.97
-10	(+14)	403	102	118	54	0.44	1.27	7.50	1.89	2.20

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]
-35	(-31)	42	11	12	25	0.20	0.13	1.74	0.44	0.51
-30	(-22)	103	26	30	31	0.27	0.32	3.15	0.79	0.92
-25	(-13)	166	42	49	38	0.34	0.52	4.30	1.08	1.26
-20	(- 4)	230	58	67	45	0.39	0.72	5.19	1.31	1.52
-15	(+ 5)	295	74	86	51	0.44	0.93	5.84	1.47	1.71
-10	(+14)	361	91	106	58	0.48	1.14	6.25	1.57	1.83

TEST CONDITIONS: @220V2000RPM		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]
-35	(-31)	111	28	32	35	0.28	0.35	3.19	0.80	0.93
-30	(-22)	166	42	49	39	0.33	0.52	4.31	1.09	1.26
-25	(-13)	247	62	72	45	0.38	0.78	5.56	1.40	1.63
-20	(- 4)	348	88	102	50	0.42	1.09	6.89	1.74	2.02
-15	(+ 5)	460	116	135	56	0.46	1.45	8.21	2.07	2.40
-10	(+14)	578	146	169	61	0.49	1.82	9.44	2.38	2.77

TEST CONDITIONS: @220V2000RPM		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]
-35	(-31)	96	24	28	34	0.28	0.30	2.83	0.71	0.83
-30	(-22)	150	38	44	40	0.34	0.47	3.85	0.97	1.13
-25	(-13)	226	57	66	46	0.39	0.71	4.94	1.24	1.45
-20	(- 4)	319	80	94	53	0.44	1.00	6.03	1.52	1.77
-15	(+ 5)	421	106	123	60	0.49	1.33	7.05	1.78	2.07
-10	(+14)	526	133	154	67	0.52	1.66	7.92	2.00	2.32

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@220V2000RPM		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)	68	17	20	31	0.24	0.21	2.25	0.57	0.66	
-30 (-22)	124	31	36	38	0.32	0.39	3.30	0.83	0.97	
-25 (-13)	200	50	59	46	0.39	0.63	4.35	1.10	1.27	
-20 (- 4)	290	73	85	54	0.45	0.91	5.33	1.34	1.56	
-15 (+ 5)	385	97	113	63	0.51	1.21	6.17	1.56	1.81	
-10 (+14)	481	121	141	71	0.56	1.52	6.80	1.71	1.99	

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)	193	49	56	54	0.41	0.60	3.60	0.91	1.05	
-30 (-22)	280	71	82	62	0.49	0.88	4.59	1.16	1.35	
-25 (-13)	391	99	115	70	0.57	1.23	5.58	1.41	1.64	
-20 (- 4)	526	133	154	80	0.64	1.65	6.58	1.66	1.93	
-15 (+ 5)	683	172	200	89	0.70	2.15	7.62	1.92	2.23	
-10 (+14)	862	217	252	99	0.75	2.72	8.70	2.19	2.55	

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)	165	42	48	52	0.40	0.52	3.18	0.80	0.93	
-30 (-22)	255	64	75	61	0.49	0.80	4.20	1.06	1.23	
-25 (-13)	365	92	107	72	0.58	1.15	5.14	1.29	1.50	
-20 (- 4)	496	125	145	83	0.66	1.56	6.02	1.52	1.76	
-15 (+ 5)	645	163	189	94	0.73	2.03	6.87	1.73	2.01	
-10 (+14)	813	205	238	105	0.79	2.56	7.72	1.94	2.26	

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)	98	25	29	46	0.35	0.31	2.17	0.55	0.64	
-30 (-22)	195	49	57	57	0.46	0.61	3.35	0.84	0.98	
-25 (-13)	309	78	91	70	0.57	0.97	4.39	1.11	1.29	
-20 (- 4)	441	111	129	83	0.67	1.39	5.32	1.34	1.56	
-15 (+ 5)	588	148	172	96	0.75	1.85	6.14	1.55	1.80	
-10 (+14)	750	189	220	109	0.82	2.37	6.89	1.74	2.02	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4000RPM		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)	283	71	83	73	0.54	0.89	3.90	0.98	1.14
-30	(-22)	387	98	114	84	0.65	1.21	4.66	1.17	1.37
-25	(-13)	525	132	154	96	0.76	1.65	5.48	1.38	1.61
-20	(- 4)	696	175	204	109	0.86	2.19	6.37	1.61	1.87
-15	(+ 5)	903	228	265	122	0.94	2.84	7.34	1.85	2.15
-10	(+14)	1146	289	336	136	1.01	3.62	8.40	2.12	2.46

TEST CONDITIONS: @220V4000RPM		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)	221	56	65	69	0.52	0.69	3.16	0.80	0.93
-30	(-22)	333	84	98	83	0.65	1.04	4.04	1.02	1.18
-25	(-13)	474	120	139	97	0.77	1.49	4.91	1.24	1.44
-20	(- 4)	646	163	189	112	0.88	2.03	5.77	1.45	1.69
-15	(+ 5)	850	214	249	128	0.97	2.68	6.65	1.68	1.95
-10	(+14)	1086	274	318	144	1.05	3.43	7.56	1.90	2.21

TEST CONDITIONS: @220V4000RPM		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)	134	34	39	61	0.46	0.42	2.23	0.56	0.65
-30	(-22)	259	65	76	77	0.61	0.81	3.31	0.84	0.97
-25	(-13)	409	103	120	94	0.75	1.28	4.32	1.09	1.26
-20	(- 4)	586	148	172	111	0.88	1.84	5.25	1.32	1.54
-15	(+ 5)	790	199	232	129	0.99	2.49	6.14	1.55	1.80
-10	(+14)	1024	258	300	147	1.08	3.23	6.98	1.76	2.05

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		