

COMPRESSOR DEFINITION

Designation	VEG T8C
Nominal Voltage/Frequency	230 V 53-133 Hz
Engineering Number	513800020

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	7.95	[cm ³] (0.485 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	20.000	
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		

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]	
241	61	71	42	0.37	0.76	5.68	1.43	1.66	

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]	
297	75	87	52	0.44	0.93	5.68	1.43	1.66	

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]	
464	117	136	82	0.66	1.46	5.67	1.43	1.66	

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]	
588	148	172	111	0.87	1.85	5.30	1.34	1.55	

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)	110	28	32	30	0.23	0.34	3.66	0.92	1.07
-30	(-22)	170	43	50	35	0.29	0.53	4.87	1.23	1.43
-25	(-13)	234	59	69	40	0.33	0.73	5.90	1.49	1.73
-20	(- 4)	307	77	90	45	0.36	0.96	6.88	1.73	2.01
-15	(+ 5)	392	99	115	49	0.38	1.23	7.91	1.99	2.32
-10	(+14)	495	125	145	54	0.41	1.56	9.11	2.30	2.67

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]	[W/W]
-35 (-31)	91	23	27	30	0.25	0.28	3.06	0.77	0.90	
-30 (-22)	152	38	44	35	0.31	0.48	4.32	1.09	1.27	
-25 (-13)	215	54	63	41	0.35	0.68	5.32	1.34	1.56	
-20 (- 4)	286	72	84	46	0.39	0.90	6.19	1.56	1.81	
-15 (+ 5)	369	93	108	53	0.42	1.16	7.03	1.77	2.06	
-10 (+14)	468	118	137	59	0.45	1.48	7.97	2.01	2.33	

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)	57	14	17	28	0.21	0.18	2.04	0.51	0.60	
-30 (-22)	120	30	35	34	0.28	0.38	3.45	0.87	1.01	
-25 (-13)	185	47	54	41	0.34	0.58	4.52	1.14	1.32	
-20 (- 4)	257	65	75	48	0.39	0.81	5.37	1.35	1.57	
-15 (+ 5)	339	85	99	55	0.43	1.07	6.12	1.54	1.79	
-10 (+14)	436	110	128	63	0.48	1.37	6.88	1.73	2.02	

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]	[W/W]
-35 (-31)	140	35	41	38	0.29	0.44	3.67	0.92	1.07	
-30 (-22)	212	53	62	43	0.35	0.67	4.89	1.23	1.43	
-25 (-13)	284	72	83	49	0.39	0.89	5.84	1.47	1.71	
-20 (- 4)	365	92	107	55	0.43	1.15	6.70	1.69	1.96	
-15 (+ 5)	466	118	137	61	0.46	1.47	7.67	1.93	2.25	
-10 (+14)	598	151	175	67	0.49	1.89	8.94	2.25	2.62	

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]	[W/W]
-35 (-31)	119	30	35	38	0.32	0.37	3.14	0.79	0.92	
-30 (-22)	195	49	57	44	0.38	0.61	4.44	1.12	1.30	
-25 (-13)	268	68	79	50	0.42	0.84	5.37	1.35	1.57	
-20 (- 4)	349	88	102	57	0.46	1.10	6.15	1.55	1.80	
-15 (+ 5)	448	113	131	65	0.50	1.41	6.93	1.75	2.03	
-10 (+14)	575	145	168	72	0.54	1.81	7.93	2.00	2.32	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2000RPM		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)	67	17	20	35	0.27	0.21	1.93	0.49	0.57	
-30 (-22)	148	37	43	42	0.34	0.47	3.42	0.86	1.00	
-25 (-13)	225	57	66	50	0.41	0.71	4.47	1.13	1.31	
-20 (- 4)	308	78	90	59	0.46	0.97	5.26	1.33	1.54	
-15 (+ 5)	406	102	119	68	0.52	1.28	5.99	1.51	1.75	
-10 (+14)	531	134	156	77	0.59	1.68	6.83	1.72	2.00	

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)	208	52	61	60	0.44	0.65	3.45	0.87	1.01	
-30 (-22)	318	80	93	68	0.53	1.00	4.63	1.17	1.36	
-25 (-13)	436	110	128	78	0.61	1.37	5.60	1.41	1.64	
-20 (- 4)	571	144	167	88	0.67	1.79	6.47	1.63	1.90	
-15 (+ 5)	731	184	214	99	0.72	2.30	7.39	1.86	2.17	
-10 (+14)	925	233	271	108	0.77	2.92	8.50	2.14	2.49	

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)	186	47	55	58	0.46	0.58	3.21	0.81	0.94	
-30 (-22)	298	75	87	67	0.55	0.93	4.43	1.12	1.30	
-25 (-13)	416	105	122	78	0.63	1.30	5.36	1.35	1.57	
-20 (- 4)	549	138	161	90	0.70	1.72	6.13	1.54	1.80	
-15 (+ 5)	705	178	207	103	0.76	2.22	6.88	1.73	2.01	
-10 (+14)	893	225	262	115	0.83	2.82	7.74	1.95	2.27	

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)	107	27	31	53	0.40	0.33	2.03	0.51	0.60	
-30 (-22)	225	57	66	64	0.50	0.70	3.45	0.87	1.01	
-25 (-13)	347	87	102	77	0.59	1.09	4.50	1.13	1.32	
-20 (- 4)	483	122	141	91	0.68	1.52	5.33	1.34	1.56	
-15 (+ 5)	640	161	188	106	0.77	2.02	6.07	1.53	1.78	
-10 (+14)	827	208	242	120	0.86	2.61	6.85	1.73	2.01	

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)	288	73	84	83	0.60	0.90	3.49	0.88	1.02
-30	(-22)	410	103	120	94	0.71	1.28	4.42	1.11	1.29
-25	(-13)	569	143	167	107	0.81	1.78	5.33	1.34	1.56
-20	(- 4)	764	193	224	122	0.90	2.40	6.27	1.58	1.84
-15	(+ 5)	995	251	292	136	0.98	3.13	7.28	1.83	2.13
-10	(+14)	1259	317	369	150	1.05	3.97	8.38	2.11	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)	236	59	69	77	0.60	0.74	3.05	0.77	0.89
-30	(-22)	362	91	106	90	0.72	1.13	4.05	1.02	1.19
-25	(-13)	523	132	153	106	0.83	1.64	4.97	1.25	1.45
-20	(- 4)	718	181	210	123	0.93	2.26	5.84	1.47	1.71
-15	(+ 5)	946	238	277	141	1.03	2.98	6.72	1.69	1.97
-10	(+14)	1206	304	353	158	1.12	3.80	7.64	1.93	2.24

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)	159	40	47	71	0.52	0.50	2.24	0.56	0.66
-30	(-22)	291	73	85	86	0.65	0.91	3.38	0.85	0.99
-25	(-13)	455	115	133	103	0.78	1.43	4.39	1.11	1.28
-20	(- 4)	651	164	191	123	0.90	2.05	5.28	1.33	1.55
-15	(+ 5)	877	221	257	144	1.01	2.76	6.12	1.54	1.79
-10	(+14)	1133	285	332	164	1.13	3.58	6.93	1.75	2.03

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EG/F/AMEM Version 2		
2 Tray holder	Yes		
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		