

COMPRESSOR DEFINITION

Designation	VEM T6H
Nominal Voltage/Frequency	230 V 53-150 Hz
Engineering Number	513903025

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	187 to 255 V	187 to 255 V
8.2 LBP (43°C Ambient temperature)	Static	187 to 255 V	187 to 255 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing pressures/temperature			
9.1 Operating (gauge)	16.2	[kgf/cm ²] (230 psig)	/ °C - °F
9.2 Peak (gauge)	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/10	[hp]
2 Displacement	5.72	[cm ³] (0.349 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	14.400	
3 Lubricant charge	220	[ml] (7.44 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	7.99	[kg] (17.61 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 53-150 Hz 3 ~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	VCC32456XXXX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	VCC32456XXXXX	
6 Start winding resistance	22.58	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	22.58	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (53/150 Hz)	2.10/2.10	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (53/150 Hz)	2.10/2.10	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (53/150 Hz)	-	[A] - Measured according to UL 984
11 Approval boards certification	IMTRO - TUV	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V1600RPM			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]
330	83	97	67	0.59	1.88	4.92	1.24	1.44

TEST CONDITIONS: @115V2000RPM			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]
380	96	111	75	0.65	2.16	5.09	1.28	1.49

TEST CONDITIONS: @115V3000RPM			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]
585	147	171	111	0.93	3.32	5.28	1.33	1.55

TEST CONDITIONS: @115V4500RPM			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]
780	197	229	154	1.24	4.43	5.06	1.28	1.48

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V2000RPM		ASHRAE32 Static				(Condensing temperature 35°C (+95°F))			
Evaporating temperature	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]
°C (°F)									
-35 (-31)	234	59	69	44	0.42	1.32	5.33	1.34	1.56
-30 (-22)	314	79	92	52	0.50	1.78	6.07	1.53	1.78
-25 (-13)	414	104	121	60	0.58	2.35	6.91	1.74	2.02
-20 (- 4)	536	135	157	69	0.66	3.05	7.85	1.98	2.30
-15 (+ 5)	683	172	200	77	0.74	3.90	8.90	2.24	2.61
-10 (+14)	858	216	252	85	0.81	4.92	10.07	2.54	2.95

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V2000RPM		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	209	53	61	46	0.43	1.18	4.51	1.14	1.32	
-30 (-22)	287	72	84	55	0.51	1.63	5.17	1.30	1.51	
-25 (-13)	384	97	113	65	0.60	2.18	5.87	1.48	1.72	
-20 (- 4)	503	127	147	75	0.70	2.86	6.63	1.67	1.94	
-15 (+ 5)	646	163	189	86	0.80	3.69	7.45	1.88	2.18	
-10 (+14)	817	206	239	98	0.90	4.68	8.34	2.10	2.44	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V2000RPM		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	181	46	53	48	0.45	1.02	3.80	0.96	1.11	
-30 (-22)	257	65	75	58	0.54	1.45	4.43	1.12	1.30	
-25 (-13)	350	88	103	69	0.64	1.99	5.06	1.28	1.48	
-20 (- 4)	466	117	136	81	0.75	2.65	5.70	1.44	1.67	
-15 (+ 5)	605	152	177	95	0.87	3.45	6.35	1.60	1.86	
-10 (+14)	772	194	226	110	1.00	4.42	7.02	1.77	2.06	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@115V2000RPM		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	150	38	44	48	0.49	0.85	3.09	0.78	0.90	
-30 (-22)	223	56	65	59	0.58	1.26	3.76	0.95	1.10	
-25 (-13)	314	79	92	72	0.68	1.78	4.37	1.10	1.28	
-20 (- 4)	425	107	125	86	0.81	2.42	4.94	1.25	1.45	
-15 (+ 5)	560	141	164	103	0.95	3.20	5.48	1.38	1.61	
-10 (+14)	722	182	212	121	1.10	4.14	5.99	1.51	1.76	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@115V3000RPM		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	359	90	105	67	0.62	2.03	5.31	1.34	1.56	
-30 (-22)	473	119	139	82	0.74	2.68	5.80	1.46	1.70	
-25 (-13)	620	156	182	96	0.86	3.52	6.52	1.64	1.91	
-20 (- 4)	805	203	236	109	0.98	4.58	7.42	1.87	2.17	
-15 (+ 5)	1029	259	301	122	1.10	5.87	8.45	2.13	2.48	
-10 (+14)	1296	326	380	135	1.22	7.42	9.57	2.41	2.81	

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V3000RPM		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	320	81	94	70	0.64	1.81	4.56	1.15	1.34	
-30 (-22)	433	109	127	86	0.75	2.45	5.06	1.28	1.48	
-25 (-13)	578	146	169	101	0.87	3.28	5.73	1.44	1.68	
-20 (- 4)	759	191	222	116	1.00	4.32	6.53	1.64	1.91	
-15 (+ 5)	978	246	287	132	1.14	5.58	7.40	1.86	2.17	
-10 (+14)	1238	312	363	149	1.29	7.10	8.30	2.09	2.43	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V3000RPM		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	279	70	82	72	0.66	1.58	3.89	0.98	1.14	
-30 (-22)	389	98	114	88	0.76	2.21	4.41	1.11	1.29	
-25 (-13)	531	134	156	104	0.89	3.01	5.05	1.27	1.48	
-20 (- 4)	706	178	207	122	1.04	4.02	5.76	1.45	1.69	
-15 (+ 5)	919	232	269	141	1.22	5.25	6.49	1.64	1.90	
-10 (+14)	1172	295	343	163	1.41	6.71	7.20	1.81	2.11	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 65°C (+149°F))					
@115V3000RPM		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	238	60	70	73	0.69	1.34	3.24	0.82	0.95	
-30 (-22)	343	87	101	90	0.80	1.95	3.82	0.96	1.12	
-25 (-13)	479	121	140	108	0.94	2.72	4.45	1.12	1.30	
-20 (- 4)	648	163	190	128	1.12	3.69	5.09	1.28	1.49	
-15 (+ 5)	852	215	250	151	1.33	4.86	5.70	1.44	1.67	
-10 (+14)	1096	276	321	177	1.57	6.28	6.23	1.57	1.83	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@115V4000RPM		Static								
Evaporating temperature	Cooling capacity			Power consumption	Current consumption	Gas flow rate	EFFICIENCY RATE			
	+/- 5%			+/- 5%	+/- 5%	+/- 5%	+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	472	119	138	94	0.83	2.67	4.98	1.26	1.46	
-30 (-22)	622	157	182	111	0.96	3.53	5.60	1.41	1.64	
-25 (-13)	816	206	239	130	1.12	4.63	6.28	1.58	1.84	
-20 (- 4)	1058	267	310	151	1.30	6.02	7.04	1.77	2.06	
-15 (+ 5)	1352	341	396	172	1.48	7.72	7.92	1.99	2.32	
-10 (+14)	1703	429	499	191	1.65	9.76	8.94	2.25	2.62	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V4000RPM		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)	400	101	117	96	0.90	2.26	4.20	1.06	1.23
-30	(-22)	550	139	161	112	0.99	3.12	4.89	1.23	1.43
-25	(-13)	744	187	218	132	1.13	4.22	5.60	1.41	1.64
-20	(- 4)	987	249	289	155	1.31	5.62	6.34	1.60	1.86
-15	(+ 5)	1283	323	376	179	1.52	7.32	7.14	1.80	2.09
-10	(+14)	1636	412	479	203	1.73	9.38	8.05	2.03	2.36

TEST CONDITIONS: @115V4000RPM		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)	342	86	100	98	0.98	1.93	3.52	0.89	1.03
-30	(-22)	484	122	142	114	1.04	2.74	4.26	1.07	1.25
-25	(-13)	672	169	197	135	1.17	3.81	4.95	1.25	1.45
-20	(- 4)	908	229	266	160	1.36	5.17	5.63	1.42	1.65
-15	(+ 5)	1199	302	351	188	1.60	6.84	6.33	1.60	1.86
-10	(+14)	1548	390	454	218	1.87	8.87	7.08	1.78	2.08

TEST CONDITIONS: @115V4000RPM		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)	298	75	87	98	1.07	1.69	3.00	0.75	0.88
-30	(-22)	426	107	125	115	1.10	2.41	3.73	0.94	1.09
-25	(-13)	599	151	176	138	1.23	3.40	4.37	1.10	1.28
-20	(- 4)	823	207	241	167	1.45	4.68	4.96	1.25	1.45
-15	(+ 5)	1102	278	323	201	1.73	6.29	5.51	1.39	1.62
-10	(+14)	1440	363	422	237	2.06	8.25	6.07	1.53	1.78

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard EUEM		
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	Slanted 42° up + 45° to Back		
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 42° up + 24° to Back		
3.3 PROCESS	6.35 +0.08/-0.08	[mm]	(0.250" +0.003"/-0.003")
3.3.1 Material	Copper(OD)		
3.3.2 Shape	Slanted 42° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		