

COMPRESSOR DEFINITION

Designation	VEG C7H
Nominal Voltage/Frequency	230 V 46-133 Hz
Engineering Number	513804015

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-134a		
3 Nominal voltage and frequency	230 / 46-133	[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	85 to 140 V	85 to 140 V
8.2 LBP (43°C Ambient temperature)	Static	85 to 140 V	85 to 140 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 ²] (202 psig)	/ °C - °F
9.2 Peak	15.9	[kgf/cm ²] (226 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/4	[hp]
2 Displacement	7.23	[cm ³] (0.441 cu.in)
2.1 Bore [mm]	22.500	
2.2 Stroke [mm]	18.200	
3 Lubricant charge	350	[ml] (11.84 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ESTER / ISO10	
4 Weight (with oil charge)	10.28	[kg] (22.66 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 46-133 Hz 3~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	VCC3 1156 XXXXX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	VCC31156XXXXX	
6 Start winding resistance	12.03	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	12.03	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	3.30/3.30/3.30	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	3.30/3.30/3.30	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (50/60 Hz)	3.30/3.30/3.30	[A] - Measured according to UL 984
11 Approval boards certification	CE - NOM - UKCA - UL	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @115V1400RPM			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]
371	93	109	62	1.02	2.11	6.03	1.52	1.77

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]
396	100	116	65	1.09	2.25	6.06	1.53	1.78

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]
504	127	148	84	1.36	2.86	5.99	1.51	1.76

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]
759	191	222	127	1.96	4.31	5.96	1.50	1.75

TEST CONDITIONS: @115V4000RPM			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]
950	239	278	164	2.45	5.40	5.81	1.46	1.70

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V1400RPM		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%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	211	53	62	35	0.65	1.19	5.97	1.50	1.75	
-30 (-22)	288	73	84	43	0.75	1.63	6.69	1.69	1.96	
-25 (-13)	380	96	111	50	0.83	2.16	7.55	1.90	2.21	
-20 (- 4)	493	124	144	57	0.90	2.80	8.60	2.17	2.52	
-15 (+ 5)	630	159	185	64	0.96	3.60	9.87	2.49	2.89	
-10 (+14)	796	201	233	70	1.02	4.56	11.41	2.88	3.34	

TEST CONDITIONS: @115V1400RPM		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)	195	49	57	38	0.68	1.10	5.20	1.31	1.52	
-30 (-22)	263	66	77	45	0.76	1.49	5.87	1.48	1.72	
-25 (-13)	349	88	102	53	0.85	1.98	6.58	1.66	1.93	
-20 (- 4)	459	116	135	62	0.95	2.61	7.39	1.86	2.17	
-15 (+ 5)	597	151	175	71	1.06	3.41	8.33	2.10	2.44	
-10 (+14)	768	194	225	81	1.19	4.40	9.43	2.38	2.76	

TEST CONDITIONS: @115V1400RPM		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)	194	49	57	44	0.70	1.10	4.37	1.10	1.28	
-30 (-22)	253	64	74	50	0.77	1.43	5.10	1.29	1.50	
-25 (-13)	334	84	98	58	0.87	1.89	5.79	1.46	1.70	
-20 (- 4)	442	111	129	68	1.00	2.51	6.48	1.63	1.90	
-15 (+ 5)	581	146	170	81	1.16	3.32	7.21	1.82	2.11	
-10 (+14)	757	191	222	94	1.36	4.33	8.01	2.02	2.35	

TEST CONDITIONS: @115V1600RPM		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%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	230	58	67	38	0.62	1.30	6.07	1.53	1.78	
-30 (-22)	318	80	93	47	0.75	1.80	6.79	1.71	1.99	
-25 (-13)	418	105	122	55	0.86	2.37	7.66	1.93	2.24	
-20 (- 4)	535	135	157	62	0.95	3.05	8.70	2.19	2.55	
-15 (+ 5)	675	170	198	68	1.02	3.85	9.96	2.51	2.92	
-10 (+14)	842	212	247	74	1.08	4.82	11.45	2.89	3.36	

E - PERFORMANCE - CURVES

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 45°C (+113°F))					
@115V1600RPM		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)	207	52	61	40	0.67	1.17	5.22	1.32	1.53	
-30 (-22)	292	74	86	50	0.79	1.66	5.87	1.48	1.72	
-25 (-13)	391	99	115	59	0.91	2.22	6.59	1.66	1.93	
-20 (- 4)	508	128	149	68	1.01	2.89	7.39	1.86	2.17	
-15 (+ 5)	648	163	190	77	1.12	3.70	8.32	2.10	2.44	
-10 (+14)	816	206	239	87	1.23	4.67	9.40	2.37	2.76	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 55°C (+131°F))					
@115V1600RPM		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)	177	45	52	40	0.69	1.00	4.40	1.11	1.29	
-30 (-22)	259	65	76	51	0.81	1.47	5.12	1.29	1.50	
-25 (-13)	355	89	104	61	0.94	2.02	5.82	1.47	1.70	
-20 (- 4)	471	119	138	73	1.08	2.68	6.51	1.64	1.91	
-15 (+ 5)	610	154	179	84	1.24	3.48	7.24	1.83	2.12	
-10 (+14)	778	196	228	97	1.41	4.46	8.04	2.03	2.36	

TEST CONDITIONS:		ASHRAE32			(Condensing temperature 35°C (+95°F))					
@115V2000RPM		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)	290	73	85	48	0.71	1.64	6.00	1.51	1.76	
-30 (-22)	389	98	114	58	0.87	2.21	6.66	1.68	1.95	
-25 (-13)	509	128	149	68	1.00	2.89	7.48	1.89	2.19	
-20 (- 4)	656	165	192	77	1.11	3.74	8.50	2.14	2.49	
-15 (+ 5)	838	211	246	86	1.20	4.79	9.73	2.45	2.85	
-10 (+14)	1061	267	311	94	1.29	6.08	11.23	2.83	3.29	

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%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	270	68	79	51	0.75	1.53	5.30	1.34	1.55	
-30 (-22)	370	93	108	63	0.92	2.10	5.88	1.48	1.72	
-25 (-13)	487	123	143	75	1.07	2.77	6.55	1.65	1.92	
-20 (- 4)	628	158	184	86	1.20	3.57	7.33	1.85	2.15	
-15 (+ 5)	799	201	234	97	1.32	4.56	8.27	2.08	2.42	
-10 (+14)	1007	254	295	107	1.45	5.77	9.38	2.36	2.75	

E - PERFORMANCE - CURVES

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%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	223	56	65	52	0.76	1.26	4.31	1.09	1.26	
-30 (-22)	330	83	97	66	0.93	1.87	4.97	1.25	1.46	
-25 (-13)	449	113	132	79	1.09	2.55	5.64	1.42	1.65	
-20 (- 4)	588	148	172	93	1.24	3.35	6.35	1.60	1.86	
-15 (+ 5)	753	190	221	106	1.40	4.30	7.14	1.80	2.09	
-10 (+14)	952	240	279	119	1.57	5.45	8.03	2.02	2.35	

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%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	434	109	127	77	1.05	2.46	5.65	1.42	1.66	
-30 (-22)	566	143	166	90	1.23	3.21	6.32	1.59	1.85	
-25 (-13)	742	187	217	104	1.41	4.21	7.13	1.80	2.09	
-20 (- 4)	963	243	282	118	1.58	5.48	8.12	2.05	2.38	
-15 (+ 5)	1230	310	360	131	1.75	7.02	9.36	2.36	2.74	
-10 (+14)	1546	390	453	142	1.93	8.86	10.90	2.75	3.19	

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%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	413	104	121	82	1.11	2.34	5.00	1.26	1.46	
-30 (-22)	552	139	162	97	1.33	3.13	5.70	1.44	1.67	
-25 (-13)	723	182	212	113	1.53	4.11	6.42	1.62	1.88	
-20 (- 4)	929	234	272	129	1.73	5.29	7.21	1.82	2.11	
-15 (+ 5)	1170	295	343	144	1.92	6.68	8.13	2.05	2.38	
-10 (+14)	1448	365	424	157	2.11	8.30	9.23	2.33	2.70	

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%						+/- 7%			
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-35 (-31)	337	85	99	83	1.13	1.91	4.05	1.02	1.19	
-30 (-22)	497	125	146	100	1.37	2.82	4.93	1.24	1.45	
-25 (-13)	678	171	199	118	1.60	3.85	5.71	1.44	1.67	
-20 (- 4)	882	222	259	137	1.82	5.02	6.45	1.62	1.89	
-15 (+ 5)	1111	280	326	155	2.03	6.34	7.19	1.81	2.11	
-10 (+14)	1366	344	400	171	2.23	7.82	7.99	2.01	2.34	

E - PERFORMANCE - CURVES

TEST CONDITIONS: @115V4000RPM		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%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	564	142	165	101	1.42	3.19	5.56	1.40	1.63	
-30 (-22)	802	202	235	131	1.78	4.54	6.10	1.54	1.79	
-25 (-13)	1034	261	303	152	2.04	5.87	6.84	1.72	2.00	
-20 (- 4)	1289	325	378	165	2.23	7.33	7.81	1.97	2.29	
-15 (+ 5)	1595	402	467	175	2.37	9.11	9.07	2.29	2.66	
-10 (+14)	1982	499	581	185	2.48	11.36	10.66	2.69	3.12	

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)	513	129	150	104	1.47	2.90	4.95	1.25	1.45	
-30 (-22)	743	187	218	136	1.83	4.21	5.45	1.37	1.60	
-25 (-13)	960	242	281	158	2.10	5.45	6.07	1.53	1.78	
-20 (- 4)	1193	301	350	174	2.30	6.79	6.86	1.73	2.01	
-15 (+ 5)	1471	371	431	187	2.45	8.40	7.88	1.98	2.31	
-10 (+14)	1821	459	534	198	2.57	10.44	9.16	2.31	2.68	

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)	415	105	122	107	1.49	2.35	3.89	0.98	1.14	
-30 (-22)	643	162	188	140	1.85	3.65	4.51	1.14	1.32	
-25 (-13)	851	214	249	163	2.12	4.83	5.18	1.31	1.52	
-20 (- 4)	1067	269	313	180	2.31	6.07	5.97	1.50	1.75	
-15 (+ 5)	1321	333	387	192	2.46	7.54	6.91	1.74	2.02	
-10 (+14)	1640	413	481	204	2.58	9.40	8.05	2.03	2.36	

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal EG/F/AMEM version 2		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	8.2 +0.12/-0.08	[mm]	(0.323" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Straight		
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	Straight		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Straight		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		