

COMPRESSOR DEFINITION

Designation	VEM T404U
Nominal Voltage/Frequency	230 V 40-150 Hz
Engineering Number	513903048

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-290		
3 Nominal voltage and frequency	230 / 40-150	[V / Hz]	
4 Application type	Low-Medium Back Pressure (Light Commercial - Curves until T.Evap -		
4.1 Evaporating temperature range	-40°C to 0°C	(-40°F to 32°F)	
5 Motor type	BPM		
6 Starting torque	LST/HST - Low/High starting torque		
7 Expansion device	Capillary tube or Expansion valve		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	-	-	-
8.2 LBP (43°C Ambient temperature)	-	-	-
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	18.4	[kgf/cm ²] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm ²] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/3+	[hp]
2 Displacement	4.25	[cm ³] (0.259 cu.in)
2.1 Bore [mm]	19.000	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	220	[ml] (7.44 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO22	
4 Weight (with oil charge)	7.18	[kg] (15.83 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELECTRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	230 V 40-150 Hz 3 ~ (Three phase)	
2 Starting device type	Inverter	
2.1 Starting device	CF03B02 M XX XX	
3 Start capacitor	-	[µF(VAC minimum)]
4 Run capacitor	-	[µF(VAC minimum)]
5 Motor protection	INVERTER CF03B02 M X	
6 Start winding resistance	13.65	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	13.65	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (50/60 Hz)	-	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (50/60 Hz)	-	[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	CE - UKCA - VDE	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V1200RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
308	78	90	60	0.45	0.92	5.12	1.29	1.50

TEST CONDITIONS: @220V1200RPM			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
314	79	92	58	0.43	0.93	5.44	1.37	1.59

TEST CONDITIONS: @220V1600RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
386	97	113	71	0.52	1.15	5.44	1.37	1.59

TEST CONDITIONS: @220V1600RPM			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
398	100	117	71	0.50	1.18	5.58	1.41	1.64

TEST CONDITIONS: @220V2000RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
494	124	145	85	0.61	1.47	5.80	1.46	1.70

TEST CONDITIONS: @220V2000RPM			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
510	128	149	84	0.56	1.52	6.05	1.52	1.77

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V3000RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
742	187	217	125	0.87	2.21	5.94	1.50	1.74

TEST CONDITIONS: @220V3000RPM			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
764	193	224	125	0.88	2.27	6.11	1.54	1.79

TEST CONDITIONS: @220V3600RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
873	220	256	147	1.03	2.60	5.94	1.50	1.74

TEST CONDITIONS: @220V3600RPM			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
906	228	265	149	1.04	2.70	6.07	1.53	1.78

TEST CONDITIONS: @220V4500RPM			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
1109	280	325	190	1.29	3.30	5.83	1.47	1.71

TEST CONDITIONS: @220V4500RPM			ASHRAELBP32 Fan		Evaporating temperature (Condensing temperature)		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
1147	289	336	193	1.30	3.41	5.94	1.50	1.74

E - PERFORMANCE - CURVES

TEST CONDITIONS:	ASHRAE32	(Condensing temperature 35°C (+95°F))
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E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1200RPM		ASHRAE32 Static								
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40 (-40)	179	45	52	29	0.25	0.53	6.21	1.57	1.82	
-35 (-31)	217	55	64	35	0.29	0.64	6.19	1.56	1.81	
-30 (-22)	261	66	77	41	0.33	0.78	6.41	1.61	1.88	
-25 (-13)	314	79	92	46	0.36	0.93	6.86	1.73	2.01	
-20 (- 4)	376	95	110	50	0.39	1.12	7.54	1.90	2.21	
-15 (+ 5)	449	113	132	54	0.42	1.35	8.45	2.13	2.47	
-10 (+14)	534	134	156	56	0.44	1.61	9.58	2.41	2.81	
-5 (+23)	631	159	185	58	0.46	1.91	10.93	2.75	3.20	
0 (+32)	743	187	218	59	0.47	2.26	12.50	3.15	3.66	

TEST CONDITIONS: @220V1200RPM		ASHRAE32 Static									(Condensing temperature 45°C (+113°F))
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%				
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-40 (-40)	170	43	50	32	0.27	0.50	5.45	1.37	1.60		
-35 (-31)	207	52	61	39	0.31	0.61	5.36	1.35	1.57		
-30 (-22)	251	63	74	46	0.35	0.74	5.45	1.37	1.60		
-25 (-13)	303	76	89	52	0.40	0.90	5.72	1.44	1.68		
-20 (- 4)	364	92	107	58	0.44	1.09	6.16	1.55	1.80		
-15 (+ 5)	436	110	128	64	0.48	1.31	6.77	1.71	1.98		
-10 (+14)	519	131	152	69	0.52	1.56	7.54	1.90	2.21		
-5 (+23)	615	155	180	73	0.55	1.86	8.48	2.14	2.48		
0 (+32)	726	183	213	77	0.58	2.21	9.57	2.41	2.81		

TEST CONDITIONS: @220V1200RPM		ASHRAE32 Static									(Condensing temperature 55°C (+131°F))
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%				
	°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]	
-40 (-40)	156	39	46	33	0.27	0.46	4.84	1.22	1.42		
-35 (-31)	193	49	57	41	0.32	0.57	4.75	1.20	1.39		
-30 (-22)	236	59	69	49	0.38	0.70	4.78	1.20	1.40		
-25 (-13)	287	72	84	58	0.43	0.85	4.92	1.24	1.44		
-20 (- 4)	348	88	102	66	0.49	1.04	5.18	1.31	1.52		
-15 (+ 5)	418	105	123	74	0.55	1.25	5.55	1.40	1.63		
-10 (+14)	500	126	147	82	0.61	1.51	6.03	1.52	1.77		
-5 (+23)	595	150	174	90	0.67	1.80	6.61	1.67	1.94		
0 (+32)	704	177	206	98	0.72	2.14	7.29	1.84	2.14		

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1200RPM		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	137	35	40	31	0.27	0.40	4.26	1.07	1.25
-35	(-31)	173	44	51	41	0.33	0.51	4.22	1.06	1.24
-30	(-22)	216	54	63	52	0.40	0.64	4.24	1.07	1.24
-25	(-13)	266	67	78	63	0.48	0.79	4.32	1.09	1.27
-20	(- 4)	325	82	95	74	0.55	0.97	4.46	1.12	1.31
-15	(+ 5)	395	100	116	86	0.63	1.18	4.65	1.17	1.36
-10	(+14)	476	120	140	98	0.72	1.43	4.89	1.23	1.43
-5	(+23)	570	144	167	110	0.80	1.72	5.18	1.30	1.52
0	(+32)	677	171	198	122	0.88	2.06	5.51	1.39	1.61

TEST CONDITIONS: @220V1600RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	222	56	65	36	0.29	0.66	6.04	1.52	1.77
-35	(-31)	275	69	81	44	0.34	0.82	6.24	1.57	1.83
-30	(-22)	335	84	98	51	0.39	0.99	6.59	1.66	1.93
-25	(-13)	403	102	118	57	0.43	1.20	7.11	1.79	2.08
-20	(- 4)	483	122	141	62	0.46	1.44	7.82	1.97	2.29
-15	(+ 5)	576	145	169	67	0.49	1.72	8.74	2.20	2.56
-10	(+14)	685	173	201	70	0.52	2.06	9.88	2.49	2.90
-5	(+23)	813	205	238	72	0.54	2.46	11.27	2.84	3.30
0	(+32)	961	242	282	74	0.55	2.92	12.92	3.26	3.79

TEST CONDITIONS: @220V1600RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	204	51	60	40	0.31	0.60	5.23	1.32	1.53
-35	(-31)	257	65	75	48	0.36	0.76	5.39	1.36	1.58
-30	(-22)	316	80	93	56	0.42	0.94	5.64	1.42	1.65
-25	(-13)	383	97	112	63	0.46	1.14	6.01	1.51	1.76
-20	(- 4)	461	116	135	70	0.51	1.38	6.51	1.64	1.91
-15	(+ 5)	552	139	162	76	0.55	1.65	7.17	1.81	2.10
-10	(+14)	658	166	193	82	0.59	1.98	8.00	2.02	2.34
-5	(+23)	782	197	229	87	0.63	2.37	9.01	2.27	2.64
0	(+32)	927	234	272	91	0.66	2.82	10.24	2.58	3.00

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V1600RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	185	47	54	41	0.32	0.55	4.64	1.17	1.36
-35	(-31)	238	60	70	50	0.38	0.70	4.79	1.21	1.40
-30	(-22)	295	74	87	59	0.44	0.88	4.99	1.26	1.46
-25	(-13)	360	91	106	68	0.50	1.07	5.25	1.32	1.54
-20	(- 4)	436	110	128	77	0.56	1.30	5.59	1.41	1.64
-15	(+ 5)	524	132	153	86	0.61	1.57	6.02	1.52	1.76
-10	(+14)	626	158	183	94	0.67	1.88	6.58	1.66	1.93
-5	(+23)	746	188	219	103	0.72	2.26	7.26	1.83	2.13
0	(+32)	886	223	260	110	0.78	2.69	8.10	2.04	2.37

TEST CONDITIONS: @220V1600RPM		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	166	42	49	40	0.32	0.49	4.12	1.04	1.21
-35	(-31)	217	55	64	50	0.39	0.64	4.31	1.09	1.26
-30	(-22)	272	69	80	61	0.46	0.81	4.49	1.13	1.32
-25	(-13)	335	84	98	73	0.53	1.00	4.68	1.18	1.37
-20	(- 4)	407	103	119	84	0.60	1.21	4.90	1.23	1.44
-15	(+ 5)	491	124	144	96	0.67	1.47	5.16	1.30	1.51
-10	(+14)	589	148	173	107	0.75	1.77	5.48	1.38	1.60
-5	(+23)	704	177	206	119	0.82	2.13	5.88	1.48	1.72
0	(+32)	838	211	246	131	0.90	2.55	6.38	1.61	1.87

TEST CONDITIONS: @220V2000RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	279	70	82	46	0.37	0.83	6.02	1.52	1.76
-35	(-31)	345	87	101	54	0.42	1.02	6.33	1.59	1.85
-30	(-22)	421	106	123	62	0.47	1.25	6.78	1.71	1.99
-25	(-13)	510	129	149	69	0.52	1.52	7.41	1.87	2.17
-20	(- 4)	614	155	180	75	0.56	1.83	8.22	2.07	2.41
-15	(+ 5)	737	186	216	80	0.60	2.21	9.24	2.33	2.71
-10	(+14)	881	222	258	85	0.63	2.65	10.50	2.65	3.08
-5	(+23)	1049	264	308	88	0.65	3.17	12.00	3.02	3.52
0	(+32)	1245	314	365	90	0.66	3.78	13.77	3.47	4.03

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V2000RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	259	65	76	49	0.38	0.77	5.34	1.35	1.57
-35	(-31)	325	82	95	58	0.44	0.96	5.56	1.40	1.63
-30	(-22)	400	101	117	67	0.50	1.18	5.88	1.48	1.72
-25	(-13)	486	123	143	76	0.56	1.45	6.33	1.59	1.85
-20	(- 4)	588	148	172	84	0.61	1.75	6.91	1.74	2.02
-15	(+ 5)	708	178	207	92	0.66	2.12	7.65	1.93	2.24
-10	(+14)	848	214	249	99	0.71	2.55	8.57	2.16	2.51
-5	(+23)	1012	255	297	105	0.75	3.06	9.69	2.44	2.84
0	(+32)	1203	303	352	110	0.79	3.66	11.03	2.78	3.23

TEST CONDITIONS: @220V2000RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	236	60	69	50	0.39	0.70	4.82	1.22	1.41
-35	(-31)	301	76	88	60	0.46	0.89	5.03	1.27	1.47
-30	(-22)	375	94	110	71	0.52	1.11	5.28	1.33	1.55
-25	(-13)	460	116	135	82	0.59	1.37	5.60	1.41	1.64
-20	(- 4)	559	141	164	92	0.66	1.67	6.01	1.52	1.76
-15	(+ 5)	676	170	198	102	0.73	2.02	6.54	1.65	1.92
-10	(+14)	813	205	238	112	0.80	2.45	7.19	1.81	2.11
-5	(+23)	973	245	285	121	0.86	2.94	7.99	2.01	2.34
0	(+32)	1159	292	339	130	0.92	3.52	8.96	2.26	2.63

TEST CONDITIONS: @220V2000RPM		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	209	53	61	48	0.39	0.62	4.31	1.09	1.26
-35	(-31)	274	69	80	60	0.46	0.81	4.56	1.15	1.34
-30	(-22)	347	87	102	73	0.54	1.03	4.80	1.21	1.41
-25	(-13)	430	108	126	86	0.62	1.28	5.07	1.28	1.49
-20	(- 4)	527	133	155	99	0.70	1.57	5.38	1.36	1.58
-15	(+ 5)	641	162	188	112	0.79	1.92	5.75	1.45	1.68
-10	(+14)	775	195	227	125	0.87	2.33	6.20	1.56	1.82
-5	(+23)	931	235	273	137	0.96	2.81	6.74	1.70	1.98
0	(+32)	1112	280	326	150	1.04	3.38	7.41	1.87	2.17

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	392	99	115	71	0.55	1.16	5.54	1.40	1.62
-35	(-31)	499	126	146	82	0.61	1.48	6.04	1.52	1.77
-30	(-22)	620	156	182	93	0.68	1.84	6.63	1.67	1.94
-25	(-13)	761	192	223	104	0.75	2.26	7.34	1.85	2.15
-20	(- 4)	925	233	271	113	0.81	2.76	8.19	2.06	2.40
-15	(+ 5)	1116	281	327	122	0.87	3.34	9.22	2.32	2.70
-10	(+14)	1338	337	392	129	0.92	4.03	10.45	2.63	3.06
-5	(+23)	1595	402	467	135	0.95	4.83	11.90	3.00	3.49
0	(+32)	1892	477	555	138	0.97	5.75	13.61	3.43	3.99

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	374	94	110	75	0.57	1.10	5.04	1.27	1.48
-35	(-31)	476	120	139	87	0.64	1.41	5.43	1.37	1.59
-30	(-22)	593	149	174	100	0.72	1.76	5.87	1.48	1.72
-25	(-13)	728	184	213	113	0.80	2.17	6.39	1.61	1.87
-20	(- 4)	887	224	260	125	0.88	2.65	7.03	1.77	2.06
-15	(+ 5)	1072	270	314	137	0.96	3.21	7.80	1.97	2.29
-10	(+14)	1289	325	378	147	1.03	3.88	8.74	2.20	2.56
-5	(+23)	1540	388	451	156	1.09	4.66	9.87	2.49	2.89
0	(+32)	1831	461	536	164	1.14	5.56	11.23	2.83	3.29

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	348	88	102	75	0.57	1.03	4.67	1.18	1.37
-35	(-31)	446	112	131	90	0.65	1.32	4.99	1.26	1.46
-30	(-22)	559	141	164	105	0.74	1.66	5.34	1.34	1.56
-25	(-13)	689	174	202	120	0.84	2.05	5.73	1.44	1.68
-20	(- 4)	843	212	247	135	0.94	2.51	6.20	1.56	1.82
-15	(+ 5)	1023	258	300	150	1.04	3.06	6.77	1.71	1.98
-10	(+14)	1233	311	361	164	1.13	3.71	7.47	1.88	2.19
-5	(+23)	1479	373	433	177	1.22	4.47	8.33	2.10	2.44
0	(+32)	1763	444	517	189	1.30	5.36	9.38	2.36	2.75

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3000RPM		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	316	80	93	72	0.57	0.93	4.30	1.08	1.26
-35	(-31)	410	103	120	89	0.66	1.21	4.62	1.16	1.35
-30	(-22)	518	131	152	107	0.76	1.54	4.91	1.24	1.44
-25	(-13)	644	162	189	125	0.87	1.91	5.23	1.32	1.53
-20	(- 4)	793	200	232	143	0.99	2.36	5.58	1.41	1.64
-15	(+ 5)	967	244	283	161	1.11	2.90	6.01	1.51	1.76
-10	(+14)	1173	295	344	179	1.22	3.53	6.52	1.64	1.91
-5	(+23)	1412	356	414	196	1.33	4.27	7.16	1.81	2.10
0	(+32)	1690	426	495	212	1.44	5.14	7.96	2.01	2.33

TEST CONDITIONS: @220V3600RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	468	118	137	87	0.66	1.38	5.38	1.36	1.58
-35	(-31)	592	149	173	100	0.74	1.75	5.92	1.49	1.73
-30	(-22)	737	186	216	112	0.82	2.19	6.55	1.65	1.92
-25	(-13)	908	229	266	125	0.90	2.70	7.29	1.84	2.14
-20	(- 4)	1108	279	325	136	0.98	3.31	8.15	2.05	2.39
-15	(+ 5)	1344	339	394	147	1.06	4.03	9.17	2.31	2.69
-10	(+14)	1618	408	474	157	1.12	4.87	10.34	2.61	3.03
-5	(+23)	1936	488	567	166	1.17	5.85	11.71	2.95	3.43
0	(+32)	2301	580	674	173	1.21	7.00	13.27	3.34	3.89

TEST CONDITIONS: @220V3600RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	437	110	128	90	0.67	1.29	4.91	1.24	1.44
-35	(-31)	556	140	163	104	0.76	1.65	5.33	1.34	1.56
-30	(-22)	696	175	204	119	0.85	2.06	5.82	1.47	1.70
-25	(-13)	861	217	252	134	0.95	2.56	6.38	1.61	1.87
-20	(- 4)	1056	266	309	149	1.05	3.15	7.05	1.78	2.07
-15	(+ 5)	1285	324	376	164	1.14	3.85	7.83	1.97	2.29
-10	(+14)	1552	391	455	177	1.23	4.67	8.75	2.20	2.56
-5	(+23)	1862	469	546	190	1.31	5.63	9.82	2.47	2.88
0	(+32)	2220	559	650	202	1.38	6.75	11.06	2.79	3.24

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V3600RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	406	102	119	91	0.69	1.20	4.49	1.13	1.32
-35	(-31)	518	131	152	107	0.78	1.53	4.86	1.22	1.42
-30	(-22)	651	164	191	124	0.88	1.93	5.26	1.33	1.54
-25	(-13)	809	204	237	142	0.99	2.41	5.71	1.44	1.67
-20	(- 4)	997	251	292	159	1.11	2.97	6.23	1.57	1.83
-15	(+ 5)	1217	307	357	177	1.22	3.65	6.84	1.72	2.00
-10	(+14)	1476	372	433	194	1.33	4.44	7.55	1.90	2.21
-5	(+23)	1777	448	521	211	1.44	5.37	8.39	2.11	2.46
0	(+32)	2125	535	623	227	1.54	6.46	9.37	2.36	2.75

TEST CONDITIONS: @220V3600RPM		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	373	94	109	91	0.70	1.10	4.03	1.02	1.18
-35	(-31)	478	120	140	109	0.80	1.41	4.40	1.11	1.29
-30	(-22)	602	152	177	127	0.91	1.79	4.77	1.20	1.40
-25	(-13)	751	189	220	147	1.03	2.23	5.16	1.30	1.51
-20	(- 4)	929	234	272	167	1.15	2.77	5.60	1.41	1.64
-15	(+ 5)	1140	287	334	188	1.29	3.41	6.09	1.53	1.78
-10	(+14)	1389	350	407	208	1.42	4.18	6.65	1.68	1.95
-5	(+23)	1680	423	492	229	1.55	5.08	7.31	1.84	2.14
0	(+32)	2017	508	591	249	1.68	6.13	8.09	2.04	2.37

TEST CONDITIONS: @220V4500RPM		ASHRAE32 Static			(Condensing temperature 35°C (+95°F))					
Evaporating temperature	Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%			
	°C	(°F)	[Btu/h]				[kcal/h]	[W]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	569	143	167	110	0.84	1.68	5.17	1.30	1.51
-35	(-31)	732	185	215	128	0.94	2.17	5.70	1.44	1.67
-30	(-22)	922	232	270	145	1.04	2.74	6.32	1.59	1.85
-25	(-13)	1143	288	335	162	1.15	3.40	7.04	1.77	2.06
-20	(- 4)	1399	353	410	179	1.27	4.17	7.86	1.98	2.30
-15	(+ 5)	1695	427	497	193	1.37	5.08	8.81	2.22	2.58
-10	(+14)	2037	513	597	207	1.46	6.13	9.88	2.49	2.90
-5	(+23)	2427	612	711	219	1.54	7.34	11.10	2.80	3.25
0	(+32)	2872	724	842	229	1.59	8.73	12.48	3.14	3.66

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V4500RPM		ASHRAE32 Static			(Condensing temperature 45°C (+113°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	531	134	156	114	0.84	1.57	4.70	1.18	1.38
-35	(-31)	690	174	202	134	0.95	2.04	5.14	1.30	1.51
-30	(-22)	876	221	257	154	1.07	2.60	5.65	1.42	1.66
-25	(-13)	1094	276	320	175	1.20	3.25	6.23	1.57	1.82
-20	(- 4)	1348	340	395	195	1.34	4.02	6.89	1.74	2.02
-15	(+ 5)	1643	414	481	214	1.47	4.92	7.64	1.93	2.24
-10	(+14)	1983	500	581	233	1.60	5.97	8.50	2.14	2.49
-5	(+23)	2374	598	696	251	1.71	7.18	9.49	2.39	2.78
0	(+32)	2819	710	826	267	1.80	8.57	10.60	2.67	3.10

TEST CONDITIONS: @220V4500RPM		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	486	122	142	114	0.84	1.43	4.28	1.08	1.25
-35	(-31)	636	160	186	136	0.96	1.88	4.68	1.18	1.37
-30	(-22)	814	205	238	159	1.09	2.41	5.12	1.29	1.50
-25	(-13)	1024	258	300	182	1.24	3.05	5.60	1.41	1.64
-20	(- 4)	1272	320	373	206	1.40	3.79	6.15	1.55	1.80
-15	(+ 5)	1561	393	457	230	1.56	4.67	6.76	1.70	1.98
-10	(+14)	1896	478	556	253	1.71	5.70	7.45	1.88	2.18
-5	(+23)	2282	575	669	276	1.86	6.90	8.24	2.08	2.41
0	(+32)	2723	686	798	299	1.99	8.28	9.13	2.30	2.67

TEST CONDITIONS: @220V4500RPM		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity (Qe) +/- 5%			Input power (We) +/- 5%	Electric current +/- 5%	Mass flow rate +/- 5%	Efficiency EER & COP +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	434	109	127	112	0.86	1.28	3.82	0.96	1.12
-35	(-31)	571	144	167	136	0.97	1.69	4.22	1.06	1.24
-30	(-22)	736	186	216	160	1.11	2.18	4.63	1.17	1.36
-25	(-13)	935	236	274	186	1.27	2.78	5.07	1.28	1.48
-20	(- 4)	1171	295	343	213	1.45	3.49	5.53	1.39	1.62
-15	(+ 5)	1449	365	425	240	1.62	4.34	6.04	1.52	1.77
-10	(+14)	1775	447	520	268	1.80	5.34	6.61	1.67	1.94
-5	(+23)	2152	542	630	296	1.98	6.50	7.25	1.83	2.12
0	(+32)	2585	651	757	324	2.14	7.85	7.97	2.01	2.33

F - EXTERNAL CHARACTERISTICS

1 Base plate	Universal
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 28° up + 25° 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	6.5 +0.12/-0.08 [mm] (0.256" +0.005"/-0.003")
3.3.1 Material	Copper
3.3.2 Shape	Slanted 42° up + 45° to Back
3.4 Oil cooler (Copper)	No [mm]
3.5 Connector sealing	Rubber Plugs