

### 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 <sup>2</sup> ] (262 psig)	/ °C - °F
9.2 Peak	20.6	[kgf/cm <sup>2</sup> ] (293 psig)	/ °C - °F
10 Maximum winding temperature	130	[ °C ]	

### B - MECHANICAL DATA

1 Commercial designation	1/3+	[hp]
2 Displacement	4.25	[cm <sup>3</sup> ] (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 <sup>2</sup> ]

### 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: <b>@220V1200RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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]
309	78	91	60	0.58	0.92	5.12	1.29	1.50

TEST CONDITIONS: <b>@220V1200RPM</b>			<b>ASHRAELBP32</b> <b>Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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]
313	79	92	58	0.58	0.93	5.43	1.37	1.59

TEST CONDITIONS: <b>@220V1600RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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]
388	98	114	71	0.66	1.15	5.44	1.37	1.59

TEST CONDITIONS: <b>@220V1600RPM</b>			<b>ASHRAELBP32</b> <b>Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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	0.68	1.18	5.59	1.41	1.64

TEST CONDITIONS: <b>@220V2000RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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	0.79	1.47	5.84	1.47	1.71

TEST CONDITIONS: <b>@220V2000RPM</b>			<b>ASHRAELBP32</b> <b>Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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]
508	128	149	84	0.76	1.51	6.04	1.52	1.77

### D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: <b>@220V3000RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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	124	1.13	2.21	5.97	1.50	1.75

TEST CONDITIONS: <b>@220V3000RPM</b>			<b>ASHRAELBP32</b> <b>Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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]
762	192	223	125	1.19	2.27	6.12	1.54	1.79

TEST CONDITIONS: <b>@220V3600RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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]
874	220	256	146	1.36	2.60	5.97	1.50	1.75

TEST CONDITIONS: <b>@220V3600RPM</b>			<b>ASHRAELBP32</b> <b>Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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]
904	228	265	148	1.38	2.69	6.11	1.54	1.79

TEST CONDITIONS: <b>@220V4500RPM</b>			<b>ASHRAELBP32</b> <b>Static</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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]
1111	280	325	189	1.70	3.31	5.88	1.48	1.72

TEST CONDITIONS: <b>@220V4500RPM</b>			<b>ASHRAELBP32</b> <b>Fan</b>		Evaporating temperature (Condensing temperature)		<b>-23.3°C (-9.94°F)</b> <b>54.4°C (129.92°F)</b>	
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]
1145	288	335	192	1.74	3.41	5.98	1.51	1.75

### E - PERFORMANCE - CURVES

TEST CONDITIONS:	<b>ASHRAE32</b>	(Condensing temperature <b>35°C (+95°F)</b> )
------------------	-----------------	---

### 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]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	180	45	53	29	0.32	0.53	6.21	1.57	1.82
-35	(-31)	217	55	64	35	0.37	0.64	6.19	1.56	1.81
-30	(-22)	262	66	77	41	0.42	0.78	6.41	1.61	1.88
-25	(-13)	315	79	92	46	0.47	0.94	6.86	1.73	2.01
-20	(- 4)	377	95	111	51	0.51	1.13	7.54	1.90	2.21
-15	(+ 5)	450	114	132	54	0.54	1.35	8.44	2.13	2.47
-10	(+14)	535	135	157	57	0.57	1.61	9.58	2.41	2.81
-5	(+23)	633	160	186	58	0.59	1.91	10.93	2.75	3.20
0	(+32)	745	188	218	59	0.60	2.27	12.49	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]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	171	43	50	32	0.34	0.50	5.44	1.37	1.60	
-35	(-31)	208	52	61	39	0.40	0.61	5.36	1.35	1.57	
-30	(-22)	252	63	74	46	0.46	0.75	5.45	1.37	1.60	
-25	(-13)	304	77	89	52	0.51	0.90	5.72	1.44	1.67	
-20	(- 4)	365	92	107	58	0.57	1.09	6.16	1.55	1.80	
-15	(+ 5)	437	110	128	64	0.62	1.31	6.76	1.70	1.98	
-10	(+14)	521	131	153	69	0.67	1.57	7.54	1.90	2.21	
-5	(+23)	617	156	181	73	0.71	1.87	8.48	2.14	2.48	
0	(+32)	728	183	213	77	0.75	2.21	9.57	2.41	2.80	

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]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	157	40	46	33	0.35	0.46	4.85	1.22	1.42	
-35	(-31)	193	49	57	41	0.42	0.57	4.75	1.20	1.39	
-30	(-22)	237	60	69	49	0.49	0.70	4.78	1.20	1.40	
-25	(-13)	288	73	84	58	0.56	0.86	4.92	1.24	1.44	
-20	(- 4)	349	88	102	66	0.64	1.04	5.18	1.31	1.52	
-15	(+ 5)	420	106	123	74	0.71	1.26	5.55	1.40	1.63	
-10	(+14)	502	126	147	82	0.79	1.51	6.03	1.52	1.77	
-5	(+23)	597	150	175	90	0.86	1.81	6.61	1.67	1.94	
0	(+32)	706	178	207	98	0.93	2.15	7.30	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	0.35	0.41	4.26	1.07	1.25
-35	(-31)	174	44	51	42	0.43	0.51	4.22	1.06	1.24
-30	(-22)	216	55	63	52	0.52	0.64	4.24	1.07	1.24
-25	(-13)	267	67	78	63	0.61	0.79	4.32	1.09	1.27
-20	(- 4)	326	82	96	74	0.71	0.97	4.46	1.12	1.31
-15	(+ 5)	396	100	116	86	0.81	1.19	4.65	1.17	1.36
-10	(+14)	478	120	140	98	0.92	1.44	4.89	1.23	1.43
-5	(+23)	572	144	167	110	1.03	1.73	5.18	1.30	1.52
0	(+32)	679	171	199	122	1.14	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)	223	56	65	37	0.38	0.66	6.04	1.52	1.77
-35	(-31)	276	70	81	44	0.44	0.82	6.24	1.57	1.83
-30	(-22)	336	85	98	51	0.50	1.00	6.59	1.66	1.93
-25	(-13)	404	102	118	57	0.55	1.20	7.11	1.79	2.08
-20	(- 4)	484	122	142	62	0.60	1.44	7.82	1.97	2.29
-15	(+ 5)	577	145	169	67	0.64	1.73	8.74	2.20	2.56
-10	(+14)	687	173	201	70	0.67	2.07	9.88	2.49	2.89
-5	(+23)	815	205	239	73	0.69	2.46	11.27	2.84	3.30
0	(+32)	964	243	282	74	0.71	2.93	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)	205	52	60	40	0.40	0.60	5.23	1.32	1.53
-35	(-31)	258	65	76	48	0.47	0.76	5.39	1.36	1.58
-30	(-22)	317	80	93	56	0.54	0.94	5.64	1.42	1.65
-25	(-13)	384	97	113	63	0.60	1.14	6.01	1.51	1.76
-20	(- 4)	462	116	135	70	0.66	1.38	6.51	1.64	1.91
-15	(+ 5)	553	139	162	76	0.72	1.66	7.17	1.81	2.10
-10	(+14)	660	166	193	82	0.77	1.99	7.99	2.01	2.34
-5	(+23)	784	198	230	87	0.82	2.37	9.01	2.27	2.64
0	(+32)	929	234	272	92	0.86	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]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	186	47	54	41	0.41	0.55	4.64	1.17	1.36
-35	(-31)	238	60	70	50	0.49	0.71	4.80	1.21	1.41
-30	(-22)	296	75	87	59	0.56	0.88	4.99	1.26	1.46
-25	(-13)	361	91	106	68	0.64	1.07	5.25	1.32	1.54
-20	(- 4)	437	110	128	77	0.72	1.30	5.59	1.41	1.64
-15	(+ 5)	525	132	154	86	0.79	1.57	6.02	1.52	1.76
-10	(+14)	628	158	184	95	0.87	1.89	6.57	1.66	1.93
-5	(+23)	748	189	219	103	0.94	2.26	7.26	1.83	2.13
0	(+32)	888	224	260	110	1.01	2.70	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]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	167	42	49	40	0.42	0.49	4.12	1.04	1.21
-35	(-31)	217	55	64	50	0.50	0.64	4.32	1.09	1.26
-30	(-22)	273	69	80	62	0.59	0.81	4.50	1.13	1.32
-25	(-13)	336	85	98	73	0.68	1.00	4.69	1.18	1.37
-20	(- 4)	408	103	120	85	0.78	1.22	4.90	1.24	1.44
-15	(+ 5)	492	124	144	96	0.87	1.47	5.16	1.30	1.51
-10	(+14)	591	149	173	108	0.97	1.78	5.48	1.38	1.60
-5	(+23)	706	178	207	119	1.07	2.13	5.87	1.48	1.72
0	(+32)	840	212	246	131	1.17	2.55	6.37	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]	[Btu/Wh]	[kcal/Wh]
-40	(-40)	279	70	82	46	0.48	0.83	6.06	1.53	1.78
-35	(-31)	345	87	101	54	0.55	1.02	6.37	1.60	1.87
-30	(-22)	421	106	123	62	0.61	1.25	6.82	1.72	2.00
-25	(-13)	510	129	149	69	0.68	1.52	7.45	1.88	2.18
-20	(- 4)	614	155	180	75	0.73	1.83	8.27	2.08	2.42
-15	(+ 5)	737	186	216	80	0.78	2.21	9.30	2.34	2.72
-10	(+14)	881	222	258	84	0.82	2.65	10.56	2.66	3.09
-5	(+23)	1049	264	308	87	0.84	3.17	12.07	3.04	3.54
0	(+32)	1245	314	365	89	0.86	3.78	13.86	3.49	4.06

### 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	0.49	0.77	5.37	1.35	1.57
-35	(-31)	325	82	95	58	0.57	0.96	5.60	1.41	1.64
-30	(-22)	400	101	117	67	0.65	1.18	5.92	1.49	1.73
-25	(-13)	486	123	143	76	0.72	1.45	6.36	1.60	1.86
-20	(- 4)	588	148	172	84	0.79	1.75	6.95	1.75	2.04
-15	(+ 5)	708	178	207	91	0.86	2.12	7.69	1.94	2.25
-10	(+14)	848	214	249	98	0.92	2.55	8.62	2.17	2.53
-5	(+23)	1012	255	297	104	0.97	3.06	9.75	2.46	2.86
0	(+32)	1203	303	352	109	1.02	3.66	11.10	2.80	3.25

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	49	0.50	0.70	4.86	1.22	1.42
-35	(-31)	301	76	88	60	0.59	0.89	5.06	1.28	1.48
-30	(-22)	375	94	110	71	0.68	1.11	5.31	1.34	1.56
-25	(-13)	460	116	135	81	0.77	1.37	5.64	1.42	1.65
-20	(- 4)	559	141	164	92	0.86	1.67	6.05	1.53	1.77
-15	(+ 5)	676	170	198	102	0.94	2.02	6.58	1.66	1.93
-10	(+14)	813	205	238	112	1.03	2.45	7.23	1.82	2.12
-5	(+23)	973	245	285	121	1.11	2.94	8.04	2.03	2.36
0	(+32)	1159	292	339	129	1.18	3.52	9.02	2.27	2.64

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	47	0.51	0.62	4.34	1.09	1.27
-35	(-31)	274	69	80	60	0.60	0.81	4.59	1.16	1.34
-30	(-22)	347	87	102	73	0.70	1.03	4.84	1.22	1.42
-25	(-13)	430	108	126	85	0.81	1.28	5.11	1.29	1.50
-20	(- 4)	527	133	155	98	0.91	1.57	5.41	1.36	1.59
-15	(+ 5)	641	162	188	111	1.02	1.92	5.78	1.46	1.69
-10	(+14)	775	195	227	124	1.13	2.33	6.23	1.57	1.83
-5	(+23)	931	235	273	137	1.24	2.81	6.78	1.71	1.99
0	(+32)	1112	280	326	149	1.35	3.38	7.45	1.88	2.18

### 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	70	0.72	1.16	5.57	1.40	1.63
-35	(-31)	499	126	146	82	0.80	1.48	6.07	1.53	1.78
-30	(-22)	620	156	182	93	0.89	1.84	6.67	1.68	1.95
-25	(-13)	761	192	223	103	0.97	2.26	7.38	1.86	2.16
-20	(- 4)	925	233	271	113	1.05	2.76	8.24	2.08	2.41
-15	(+ 5)	1116	281	327	121	1.12	3.34	9.27	2.34	2.72
-10	(+14)	1338	337	392	128	1.19	4.03	10.50	2.65	3.08
-5	(+23)	1595	402	467	134	1.23	4.83	11.97	3.02	3.51
0	(+32)	1892	477	555	137	1.26	5.75	13.69	3.45	4.01

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	74	0.74	1.10	5.07	1.28	1.49
-35	(-31)	476	120	139	87	0.83	1.41	5.46	1.38	1.60
-30	(-22)	593	149	174	100	0.93	1.76	5.90	1.49	1.73
-25	(-13)	728	184	213	113	1.04	2.17	6.43	1.62	1.88
-20	(- 4)	887	224	260	125	1.14	2.65	7.07	1.78	2.07
-15	(+ 5)	1072	270	314	136	1.24	3.21	7.85	1.98	2.30
-10	(+14)	1289	325	378	146	1.33	3.88	8.79	2.22	2.58
-5	(+23)	1540	388	451	156	1.41	4.66	9.93	2.50	2.91
0	(+32)	1831	461	536	163	1.48	5.56	11.29	2.85	3.31

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	0.74	1.03	4.70	1.18	1.38
-35	(-31)	446	112	131	89	0.85	1.32	5.02	1.27	1.47
-30	(-22)	559	141	164	104	0.97	1.66	5.37	1.35	1.57
-25	(-13)	689	174	202	119	1.09	2.05	5.76	1.45	1.69
-20	(- 4)	843	212	247	135	1.22	2.51	6.23	1.57	1.83
-15	(+ 5)	1023	258	300	149	1.34	3.06	6.81	1.72	2.00
-10	(+14)	1233	311	361	163	1.46	3.71	7.52	1.89	2.20
-5	(+23)	1479	373	433	176	1.58	4.47	8.38	2.11	2.46
0	(+32)	1763	444	517	187	1.68	5.36	9.44	2.38	2.77



### 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	0.74	0.93	4.33	1.09	1.27
-35	(-31)	410	103	120	89	0.86	1.21	4.64	1.17	1.36
-30	(-22)	518	131	152	106	0.99	1.54	4.94	1.25	1.45
-25	(-13)	644	162	189	124	1.14	1.91	5.26	1.32	1.54
-20	(- 4)	793	200	232	142	1.28	2.36	5.61	1.41	1.64
-15	(+ 5)	967	244	283	160	1.43	2.90	6.04	1.52	1.77
-10	(+14)	1173	295	344	178	1.58	3.53	6.56	1.65	1.92
-5	(+23)	1412	356	414	195	1.73	4.27	7.20	1.82	2.11
0	(+32)	1690	426	495	211	1.87	5.14	8.00	2.02	2.34

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)	469	118	137	86	0.88	1.38	5.42	1.37	1.59
-35	(-31)	592	149	174	99	0.98	1.75	5.96	1.50	1.75
-30	(-22)	738	186	216	112	1.08	2.19	6.59	1.66	1.93
-25	(-13)	909	229	266	124	1.19	2.70	7.33	1.85	2.15
-20	(- 4)	1110	280	325	136	1.29	3.31	8.20	2.07	2.40
-15	(+ 5)	1345	339	394	147	1.39	4.03	9.22	2.32	2.70
-10	(+14)	1620	408	475	157	1.48	4.88	10.40	2.62	3.05
-5	(+23)	1938	488	568	165	1.55	5.86	11.77	2.97	3.45
0	(+32)	2304	581	675	172	1.60	7.00	13.35	3.36	3.91

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)	438	110	128	89	0.89	1.29	4.94	1.24	1.45
-35	(-31)	557	140	163	104	1.00	1.65	5.36	1.35	1.57
-30	(-22)	697	176	204	118	1.12	2.07	5.85	1.47	1.71
-25	(-13)	862	217	253	133	1.25	2.56	6.42	1.62	1.88
-20	(- 4)	1057	266	310	148	1.38	3.15	7.09	1.79	2.08
-15	(+ 5)	1286	324	377	163	1.51	3.85	7.88	1.99	2.31
-10	(+14)	1554	392	455	176	1.62	4.68	8.80	2.22	2.58
-5	(+23)	1864	470	546	189	1.73	5.64	9.88	2.49	2.90
0	(+32)	2222	560	651	201	1.82	6.75	11.13	2.81	3.26

### 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]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	406	102	119	91	0.91	1.20	4.52	1.14	1.32
-35	(-31)	519	131	152	107	1.03	1.54	4.89	1.23	1.43
-30	(-22)	652	164	191	123	1.16	1.93	5.29	1.33	1.55
-25	(-13)	810	204	237	141	1.31	2.41	5.75	1.45	1.68
-20	(- 4)	998	251	292	158	1.46	2.98	6.27	1.58	1.84
-15	(+ 5)	1219	307	357	176	1.61	3.65	6.88	1.73	2.02
-10	(+14)	1478	372	433	193	1.76	4.45	7.60	1.92	2.23
-5	(+23)	1779	448	521	210	1.90	5.38	8.44	2.13	2.47
0	(+32)	2127	536	623	226	2.03	6.47	9.43	2.38	2.76

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]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	373	94	109	91	0.93	1.10	4.05	1.02	1.19
-35	(-31)	478	121	140	108	1.06	1.42	4.43	1.12	1.30
-30	(-22)	603	152	177	127	1.20	1.79	4.80	1.21	1.41
-25	(-13)	752	190	220	146	1.36	2.24	5.20	1.31	1.52
-20	(- 4)	930	234	273	166	1.53	2.77	5.63	1.42	1.65
-15	(+ 5)	1142	288	335	187	1.70	3.42	6.12	1.54	1.79
-10	(+14)	1391	350	408	207	1.88	4.18	6.69	1.69	1.96
-5	(+23)	1682	424	493	228	2.05	5.08	7.35	1.85	2.15
0	(+32)	2019	509	592	248	2.22	6.14	8.13	2.05	2.38

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]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	570	144	167	109	1.11	1.68	5.21	1.31	1.53
-35	(-31)	733	185	215	127	1.23	2.17	5.75	1.45	1.69
-30	(-22)	923	233	271	144	1.37	2.74	6.38	1.61	1.87
-25	(-13)	1144	288	335	161	1.52	3.40	7.10	1.79	2.08
-20	(- 4)	1401	353	410	177	1.66	4.18	7.93	2.00	2.32
-15	(+ 5)	1697	428	497	192	1.80	5.08	8.88	2.24	2.60
-10	(+14)	2039	514	598	206	1.92	6.14	9.96	2.51	2.92
-5	(+23)	2430	612	712	218	2.02	7.35	11.19	2.82	3.28
0	(+32)	2875	725	843	228	2.09	8.74	12.58	3.17	3.69

### 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)	532	134	156	113	1.10	1.57	4.74	1.19	1.39
-35	(-31)	691	174	202	133	1.24	2.04	5.19	1.31	1.52
-30	(-22)	877	221	257	153	1.41	2.60	5.70	1.44	1.67
-25	(-13)	1095	276	321	173	1.58	3.26	6.28	1.58	1.84
-20	(- 4)	1350	340	395	193	1.76	4.03	6.94	1.75	2.03
-15	(+ 5)	1645	415	482	213	1.94	4.93	7.70	1.94	2.26
-10	(+14)	1986	500	582	231	2.11	5.97	8.57	2.16	2.51
-5	(+23)	2377	599	696	249	2.26	7.19	9.56	2.41	2.80
0	(+32)	2823	711	827	266	2.38	8.58	10.68	2.69	3.13

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	123	143	114	1.11	1.44	4.32	1.09	1.27
-35	(-31)	637	160	187	135	1.26	1.88	4.72	1.19	1.38
-30	(-22)	815	205	239	158	1.44	2.42	5.16	1.30	1.51
-25	(-13)	1026	258	301	181	1.64	3.05	5.65	1.42	1.66
-20	(- 4)	1273	321	373	205	1.85	3.80	6.20	1.56	1.82
-15	(+ 5)	1563	394	458	228	2.06	4.68	6.81	1.72	2.00
-10	(+14)	1898	478	556	252	2.26	5.71	7.51	1.89	2.20
-5	(+23)	2285	576	669	275	2.46	6.91	8.30	2.09	2.43
0	(+32)	2727	687	799	297	2.63	8.29	9.20	2.32	2.70

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	111	1.13	1.28	3.85	0.97	1.13
-35	(-31)	571	144	167	135	1.28	1.69	4.26	1.07	1.25
-30	(-22)	737	186	216	159	1.47	2.19	4.67	1.18	1.37
-25	(-13)	936	236	274	185	1.68	2.78	5.11	1.29	1.50
-20	(- 4)	1172	295	344	211	1.91	3.50	5.58	1.41	1.63
-15	(+ 5)	1451	366	425	239	2.14	4.34	6.09	1.54	1.79
-10	(+14)	1777	448	521	266	2.38	5.34	6.67	1.68	1.95
-5	(+23)	2154	543	631	294	2.61	6.51	7.31	1.84	2.14
0	(+32)	2588	652	758	322	2.82	7.86	8.03	2.02	2.35

### 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