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P. O. BOX 92916

LONG BEACH, CALIFORNIA 90809-2916

PHONE (562) 426-7049



VIN KAROLA INSTRUMENTS

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VACUUM EVAPORATION SOURCE POWER REQUIREMENT TABLE

Part #	Volts A	mps	Watts	Temp.	Part #	Volts A	mps	Watts	Temp.	Part #	Volts A	mps	Watts	Temp.
B1040W	3.47	34	118	1800 °C	F3040W	3.91	39	152	1800 °C	F16B	1.19	149	177	1500 °C
B1-3x.025W	4.22	43	181	1800 °C	F3-2x.040W	4.00	68	272	1800 °C	F16C	1.30	172	224	1500 °C
B1-3x.030W	3.69	53	196	1800 °C	F3-3x.025W	4.61	48	221	1800 °C	F16D	3.62	223	807	1500 °C
B2040W	3.04	36	109	1800 °C	F3-3x.030W	4.15	60	249	1800 °C	FB1005Mo	1.65	293	483	1400 °C
B2-3x,025W	3.50	44		1800 °C	F3-4x.030W	4.00	77	308	1800 °C	FB1005Ta	3.78	339	1281	1600 °C
B2-3x.030W	3.00	54		1800 °C	F4040W	3.70	38	141	1800 °C	FB1010Mo	1.21	413	500	1400 °C
B3040W	5.40	33	178	1800 °C	F4-2x.040W	3.97	66	262	1800 °C	FB1010Ta	2.93	462	1354	1600 °C
B3-3x.025W	3.51	42	147	1800 °C	F4-3x.025W	5.29	48	254	1800 °C	FB1015Mo	1.38	634	875	1400 °C
B4-,060W	4.02	59	237	1800 °C	F4-3x.030W	4.28	62	265	1800 °C	FB1015Ta	2.57	641	1647	1600 °C
B4-3x.030W	5.24	52	272	1800 °C	F4-4x.030W	3.63	73	265	1800 °C	FB2005Mo	1.90	320	608	1400 °C
B5040W	5.50	33	182	1800 °C	F5040W	6.90	37	255	1800 °C	FB2005Ta	3.88	348	1350	1600 °C
B5-3x,025W	5.83	37	216	1800 °C	F5-2x.040W	6.82	64	436	1800 °C	FB2010Mo	1.38	448	618	1400 °C
B6040W	6.62	32	212	1800 °C	F5-3x.025W	8.05	45	362	1800 °C	FB2010Ta	2.77	491	1360	1600 °C
B6-3x.025W	7.04	39	275	1800 °C	F5-3x.030W	6.58	57	375	1800 °C	FB2015Mo	1.16	547	635	1400 °C
B7040W	6.22	32	199	1800 °C	F5-3x.040W	5.60	83	465	1800 °C	FB2015Ta	2.56	657	1682	1600 °C
B7-3x.025W	6.84	38	260	1800 °C	F5-4x.030W	6.10	69	421	1800 °C	FB3005Mo	2.23	303	676	1400 °C
B8A-3x.025W	6.28	47	295	1800 °C	F6-2x.040W	7.20	64	461	1800 °C	FB3005Ta	4.60	301	1385	1600 °C
B8A-3x.025W B8A-3x.030W	6.06	55	333	1800 °C	F6-3x.025W	8,72	44	384	1800 °C	FB3010Mo	1.60	431	690	1400 °C
B8B-3x.025W	5.80	43	249	1800 °C	F6-3x.030W	8.25	58	478	1800 °C	FB3010Ta	3.89	521	2027	1600 °C
	5.80 5.15	40 57	294	1800 °C	F6-3x.040W	6.42	84	539	1800 °C	FB3015Mo	1.38	536	740	1400 °C
B8B-3x.030W	8.42	57	480	1800 °C	F6-4x.030W	7.29	71	518	1800 °C	FB3015Ta	3,73	736	2745	1600 °C
B9-3x.030W	0.42 7.18	-57 85	610	1800 °C	F7-2x.040W	10.97	55	603	1800 °C	FB4005Mo	2,18	300	654	1400 °C
B9-3x.040W	7.16	70	543	1800 °C	F7-3x.030W	11.65	52	606	1800 °C	FB4005Ta	4.14	277	1147	1600 °C
B9-4x.030W		85	742	1800 °C	F7-3x.040W	9.40	78	733	1800 °C	FB4010Mo	1.60	413	661	1400 °C
B10-3x.040W	8.73		693	1800 °C	F7-4x.030W	10.31	65	670	1800 °C	FB4-,010Ta	3.64	495	1802	1600 °C
B10-4x.030W	9.76	71	1655	1800 °C	F8-2x.040W	5.00	66	330	1800 °C	FB4015Mo	1.72	663	1140	1400 °C
B11-3x.040W	19.70	84 37	185	1800 °C	F8-3x.030W	5.39	62	334	1800 °C	FB4015Ta	3.15	646	2035	1600 °C
B12A040W	5.00	37 44	234	1800 °C	F8-3x.040W	4.61	87	401	1800 °C	FB10005Mo	.753	166	125	1400 °C
B12A-3x.025W	5.31	44 55	264 264	1800 °C	F8-4x.030W	5.09	74	377	1800 °C	FB10005Ta	1.56	159	248	1600 °C
B12A-3x.030W	4.80	33	131	1800 °C	F9-2x.040W	6.66	65	433	1800 °C	FB10010Mo	.661	265	175	1400 °C
B12B040W	3.96		251	1800 °C	F9-3x.030W	6.50	57	370	1800 °C	FB10010Ta	1.12	242	271	1600 °C
B12B060W	2.54	99 41	201 187	1800 °C	F9-3x.040W	5.43	86	467	1800 °C	FB10015Mo	.675	351	237	1400 °C
B12B-3x.025W	4.56	41 57	181	1800 °C	F9-4x.030W	6.07	71	431	1800 °C	FB10015Ta	1.12	341	382	1600 °C
B12B-3x.030W	3.17	37	119	1800 °C	F10-2x.040W	10.62	61	648	1800 °C	FB11005Mo	1.11	118	131	1400 °C
B13040W	3.22	37 45	182	1800 °C	F10-3x.030W	10.90	55	600	1800 °C	FB11005Ta	2.12	137	290	1600 °C
B13-3x.025W	4.04		192	1800 °C	F10-3x.040W	9.02	83	749	1800 °C	FB11010Mo	.760	186	141	1400 °C
B13-3x.030W	3.36	57 54	261	1800 °C	F10-4x.030W	10.00	68	680	1800 °C	FB11010Ta	1.69	207	350	1600 °C
B14060W	4.83		312	1800 °C	F11-2x.040W	6.74	65	438	1800 °C	FB11015Mo	.713	243	173	1400 °C
B14-3x.030W	6.25	50 62	361	1800 °C	F11-3x.030W	7.07	58	410	1800 °C	FB11015Ta	1.45	253	367	1600 °C
B14-4x.030W	5.82		366	1600 °C	F11-3x.040W	5.70	87	496	1800 °C	FB12005Mo	1.2	143	172	1400 °C
CH-1	1.34	273 346	- 300 619	1600 °C	F11-4x.030W	6.40	70	448	1800 °C	FB12005Ta	2.0	141	282	1600 °C
CH-5	1.79	340 187	275	1600 °C	F12-3x.025W	4.44	46	204	1800 °C	FB12010Mo	.875	211	185	1400 °C
CH-7	1.47	187	275 344	1600 °C	F12-3x.025W	3.82	-0 57	218	1800 °C	FB12010Ta	1.63	200	326	1600 °C
CH-8	1.73				F13-3x.025W	11.00	44	484	1800 °C	FB12015Mo	.834	272	227	1400 °C
CH-9	1.93	191	369	1600 °C		9,06	57	516	1800 °C	FB12015Ta	1.49	257	383	1600 °C
CH-10	1.70	191	325	1600 °C	F13-3x.030W	9.00 8.59	· 71	610	1800 °C	H1040W	7.90	31	245	1800 °C
CH-11	1.70	191	325	1600 °C	F13-4x.030W F14-3x.030W	9.44	56		1800 °C	H1060W	6.10	71	433	1800 °C
CH-12	2.19	339	742	1600 °C		9.44 8.20	88		1800 °C	H2040W	4.18	36	150	1800 °C
CH-13	2.19	339	742	1600 °C	F14-3x.040W				1800 °C	H2060W	2.83	69	195	1800 °C
CH-14	3.82	525		1600 °C	F14-4x.030W	8.80 11.53		657	1800 °C	H3040W	7.39	34		1800 °C
F1040W	3.07	36	111	1800 °C	F15-3x.030W	11.53 9.66	57 85		1800 °C	H3060W	5,22	63		1800 °C
F1-3x.025W	3.00	42	126	1800 °C	F15-3x.040W		85 70			ME-19	1.26	257	324	1600 °C
F1-3x.030W	2.94	54	159	1800°C	F15-4x.030W	10.63	70 95			ME-20	1.16	169		1600 °C
F2-3x.025W	3.43	49	168	1800 °C	F16-3x.040W	6.26 6.75	85 60		_	ME1	1.45	266		1600 °C
F2-3x.030W	3.08	63	194	1800 °C	F16-4x.030W	6.75	69 1/18		1500 °C	ME2	2.52	141		1600 °C
F2-4x.030W	2.70	77	208	1800 °C	F16A	1.12	148	100	1500 0	111-6-	£., U £		500	

Power table for above sources is for reference only.

With evaporant added the power required could change significantly. Sources were tested without evaporant or crucibles installed.

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VIN KAROLA INSTRUMENTS

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VACUUM EVAPORATION SOURCE POWER REQUIREMENT TABLE

Part #	Volts	Amps	Watt	s Temp.	Part #	Volts	Amps	Watte	s Temp.	Part #	Volts	Amps	Watts	s Temp.
ME2/ME2A	1.74	176	306	1600 °C	ME17-3x.025W	4.57	40	183	1800 °C	S1-AO-W	1.00	106	106	1200 °C
ME3005Mo	.94	150	141	1400 °C	ME18A-3x.025W	6.56	48	315	1800 °C	S2A005Mo	1.72	86	148	1400 °C
ME3005Ta	1.77	138	244	1600 °C	ME18A-3x.030W	5.00	55	275	1800 °C	S2A005Ta	3.37	100	337	1600 °C
ME3005W	2.00	202	404	1800 °C	ME18B-3x.025W	4.70	43	202	1800 °C	S2A005W	3.85	140	539	1800 °C
ME3-AO-Mo	.86	151	130	1200 °C	ME18B-3x.030W	4.25	56	238	1800 °C	S2A010Mo	1.13	130	147	1400 °C
ME4005Mo	.94	93	87	1400 °C	ME19	1.23	242	298	1600 °C	S2A010Ta	2.27	133	302	1600 °C
ME4005Ta	1.50	98	147	1600 °C	ME20	1.12	159	178	1600 °C	S2A010W	2.57	185	475	1800 °C
ME4005W	1.83	143	262	1800 °C	ME21005Mo	.94	147	138	1400 °C	S2A015W	2.20	242	532	1800 °C
ME4-AO-Mo	.83	116	-96	1200 °C	ME21005Ta	1.75	141	247	1600 °C	S2B005Mo	1.15	119	137	1400 °C
ME5005Mo	.85	58	49	1400 °C	ME21005W	1.96	213	417	1800 °C	S2B-,005Ta	3.42	97	332	1600 °C
ME5005Ta	1.40	55	77	1600 °C	ME22	1.87	196	367	1600 °C	S2B005W	3.87	140	542	1800 °C
ME5005W	1.69	80	135	1800 °C	ME22/ME22A	1.45	265	384	1600 °C	S2B010Mo	1.10	131	144	1400 °C
ME6A005Mo	.85	102	87	1400 °C	ME22B-AO-Ta	1.30	259	337	1200 °C	S2B010Ta	2.33	130	303	1600 °C
ME6A005Ta	1.85	95	176	1600 °C	ME22B/ME22A-AO	1.09	293	319	1200 °C	S2B010W	2.58	187	482	1800 °C
ME6A005W	1.83	145	265	1800 °C	ME220/ME22A-AO	.79	251	198	1400 °C	S2B015W	2.06	245	505	1800 °C
ME6B005Mo	.90	97	200 87	1400 °C	ME23005Ta	1.51	215	325	1600°C	S2B-AO-Mo	1.12	141	158	1200 °C
ME6B005Ta	.50 1.73	96 96	166	1400 °C	ME23005Ta	1.40	327	458	1800 °C	S2B-AO-W	1.12	141	159	1200 °C
ME6B005W		90 144	271	1800 °C		.83	327 248	400 206			.13	64	63	1200°C
ME6B-AO-Mo	1.88		89		ME24005Mo				1400°C	S3005Mo		64		1400 °C
	.84	106		1200 °C	ME24005Ta	1.47	230	338	1600 °C	S3005Ta	2.04		131	
ME7005Mo	1.12	53	59	1400 °C	ME24005W	1.66	322	535	1800 °C	S3005W	1.95	100	195	1800 °C
ME7005Ta	1.72	49	84	1600 °C	P1060W	2.08	73 70	152	1800 °C	S3010Mo	.77	103	79	1400 °C
ME7005W	2.03	76	154	1800 °C	P1-3x.025W	2.95	50	148	1800°C	S3010Ta	1.44	92	132	1600 °C
ME8005Mo	1.04	79	82	1400 °C	P1-3x.030W	2.36	65	153	1800°C	S3010W	1.47	158	232	1800 °C
ME8005Ta	2.16	93	201	1600 °C	P1-4x.030W	2.76	80	221	1800°C	S3015W	1.96	130	255	1800 °C
ME8005W	2.57	129	332	1800 °C	P2060W	1.84	75	138	1800 °C	S3-AO-MO	.79	114	90	1200 °C
ME9005Mo	.80	72	58	1400 °C	P2-3x.025W	2.83	48	136	1800 °C	S3-AO-W	.83	117	97	1200 °C
ME9005Ta	1.48	67	99	1600 °C	P2-3x.030W	3.56	78	278	1800 °C	S4005Mo	1.31	63	83	1400 °C
ME9005W	1.55	97	150	1800 °C	P2-4x.030W	2.04	82	167	1800 °C	S4005Ta	2.62	64	168	1600 °C
ME9-AO-Mo	.80	83	66	1200 °C	P3060W	1.39	79	110	1800 °C	S4005W	2.76	96	265	1800 °C
ME10005Ta	1.07	131	140	1600 °C	P3-3x.025W	2.26	50	113	1800 °C	S4010Mo	.97	93	90	1400 °C
ME11030W	3.59	25	90	1800 °C	P3-3x.030W	1.94	64	124	1800 °C	S4010Ta	1.83	93	170	1600 °C
ME11-3x.025W	3.13	44	138	1800 °C	P3-4x.030W	1.59	84	134	1800 °C	S4010W	2.03	138	280	1800 °C
ME12030W	2.47	27	67	1800 °C	P4060W	2.04	74	151	1800 °C	S4015W	1.51	191	288	1800 °C
ME12-3x.025W	2.30	47	108	1800 °C	P4-3x.025W	3.20	51	163	1800 °C	S5005Mo	1.59	133	211	1400 °C
ME13A030W	1.25	33	41	1800 °C	P4-3x.030W	2.04	64	131	1800 °C	S5005Ta	3.29	149	490	1600 °C
ME13A-3x.025W	1.08	61	66	1800 °C	P4-4x.030W	2.69	80	215	1800 °C	S5010Mo	1.02	208	212	1400 °C
ME13B030W	1.95	27	53	1800 °C	P5040W	3.44	40	138	1800 °C	S5010Ta	2.09	220	460	1600 °C
ME13B-3x.025W	1.68	52	87	1800 °C	P5060W	3.09	71	219	1800 °C	S6005Mo	1.46	123	180	1400 °C
ME13C030W	1.95	26	51	1800 °C	P5-3x.025W	3.80	51	194	1800 °C	S6005Ta	2.77	133	368	1600 °C
ME13C-3x.025W	1.56	53	83	1800 °C	P5-3x.030W	3.50	66	231	1800 °C	S6005W	3.04	199	605	1800 °C
ME14030W	3.21	24	77	1800 °C	P5-4x.030W	3.13	79	247	1800 °C	S6010Mo	.99	181	179	1400 °C
ME14040W	2.90	36	104	1800 °C	P6040W	1.94	42	81	1800 °C	S6010Ta	2.00	186	372	1600 °C
ME15030W	4.18	23	96	1800 °C	P6060W	1.46	75	109	1800 °C	S6010W	2.14	263	563	1800 °C
ME15040W	3.63	34	123	1800 °C	P6-3x.025W	2.08	51	106	1800°C	S7005Mo	1.21	108	131	1400 °C
ME16A030W	2.48	23	57	1800 °C	P7-3x.030W	2.78	69	192	1800 °C	S7005Ta	2.48	138	342	1600 °C
ME16A-3x.025W	2.30	39	90	1800 °C	P7-4x.030W	2.42	87	211	1800 °C	S7010Mo	.96	180	173	1400 °C
ME16B030W	2.90	23	67	1800 °C	P8-3x.025W	9.48	54	512	1800 °C	S7010Ta	1.80	155	279	1600 °C
ME16B-3x.025W	2.66	42	112	1800 °C	P8-3x.030W	8.28	72	596	1800 °C	S7010W	1.92	258	495	1800 °C
ME16C030W	3.77	23		1800 °C	S1005Mo	1.29	63		1400 °C	S8A005Mo	1.95	78		1400°C
ME16C-3x.025W	3.54	43	152	1800 °C	S1005Ta	2.72	64		1600 °C	S8A005Ta	4.44	92	408	1600 °C
ME16D030W	5.96	21	125	1800 °C	S1010Mo	.96	96		1400 °C	S8A005W	4.96	136	675	1800 °C
ME16D-3x.025W	5.51	40	220	1800 °C	S1010Ta	1.91	96		1600°C	S8A010Mo	1.33	112	149	1400 °C
ME16E040W	4.25	40 32	136	1800 °C	S1010W	1.79	144		1800°C	S8A010Ta	2.92	129	377	1600 °C
ME16E-3x.025W	4.25 5.00		220	1800 °C	S1015W	1.50	184		1800 °C	S8A010W	3.11	185	575	1800 °C
ME17030W	5.00 4.93			1800 °C	S1-AO-Mo	.95	104		1200°C	S8A015W	2.37	234	555	1800 °C
	4.90	22	100	1000 0	31-AU-1010	.90		100	1200 0	30A013W	2.07	204	000	1000 0

Power table for above sources is for reference only.

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VIN KAROLA INSTRUMENTS

VACUUM EVAPORATION SOURCE POWER REQUIREMENT TABLE

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SBB.dotDMA 142 123 284 160°C SBC.100TA 312 600°C SBC.100TA 20.4 123 244 160°C SBB.dotDTA 1.44 610°C SSP-015TA 2.70 721 1977 190°C SS2A.4.00TM 340 94 320 160°C SBB.dotTA 2.86 160°C SSAA.00TM 2.80 480°C SSAA.00TM 340 94 320 160°C SSAA.00TM 340 94 320 160°C SSAA.00TM 341 440 127 128 164 160°C SSAA.01TM 120 SSAA.00TM 120 SSAA.01TM 120 120°C SSAA.01TM 120°C	Part #	Volts	Amps	Watt	s Temp.	Part #	Volts /	Amps	Watts	Temp.	Part #	Volts	Amps	Watts	s Temp.
BBB.010Mb 140 170 281 600°C SBP-0173 270 721 1947 190°C SSAD.0174 340 94 320 180°C SBB.010W 286 100°C SBP-0275 250 4820 180°C SSAD.005W 127 127 181 140 127 127 161 140°C SSAD.015W 126 123 156 180°C SSAD.015W 250 AUD SSAD.015W 250 160°C SSAD.015W 251 160°C SSAD.015W 251 160°C SSAD.015W 251 160°C SSAD.015W 251 160°C SSAD.015T 251 160°C SSAD.015T 251 160°C SSAD.015T 251 160°C	S8B005Mo	1.92	123	236	1400 °C		3.12	601	1875	1600 °C	S19C-Ta	2.64	132	348	1600 °C
SBB. D10Ta 288 100 Ta 288 200 Ta 250 484 270 100 TC S20A.D0TMM 326 140 550 160 TC SBB. D10W 248 328 1600 TC SSFA.D0-M 1.00 163 884 1207 TS 281 1600 TC SSFA.D10M 2.00 1600 TC SSFA.D10M 2.01 1600 TC SSFA.D10M 2.01 1600 TC SSFA.D10M 2.01 1600 TC SSFA.D10M 2.01 1000 TC SSFA.D10M 1.01 1.02 2.01 1.01 2.01 1.01 2.01 1.01 2.01 1.01 2.01 1.01 2.01 1.01 2.01 1.01 2.01 1.01 1.01 1.01 <td< td=""><td>S8B005Ta</td><td>4.44</td><td>139</td><td>617</td><td>1600 °C</td><td>S9F015Mo</td><td>1.44</td><td></td><td></td><td>1400 °C</td><td>S20A005Mo</td><td>1.84</td><td>81</td><td>149</td><td>1400 °C</td></td<>	S8B005Ta	4.44	139	617	1600 °C	S9F015Mo	1.44			1400 °C	S20A005Mo	1.84	81	149	1400 °C
SBB. 010W 288 282 282 828 8100 'C SBD. 015W 120 CB 887 1200 'C SBD. 015W 1261 <td>S8B010Mo</td> <td>1.40</td> <td>170</td> <td>238</td> <td>1400 °C</td> <td>S9F015Ta</td> <td>2.70</td> <td>721</td> <td>1947</td> <td>1600 °C</td> <td>S20A005Ta</td> <td>3.40</td> <td>94</td> <td>320</td> <td>1600 °C</td>	S8B010Mo	1.40	170	238	1400 °C	S9F015Ta	2.70	721	1947	1600 °C	S20A005Ta	3.40	94	320	1600 °C
SBB. D101W 224 274 828 1900°C SBF. AD-W 1.40 628 828 1200°C S26A.D107A 2.51 123 271 620 628 628 620°C S26A.D107A 2.51 823 628 630°C 530A.D107A 2.51 823 826 160°C S26A.D107A 2.51 826 160°C S26A.D107A 2.51 826 160°C S26A.D107A 2.51 160°C S26A.D107A 2.51 160°C S26A.D107A 2.51 160°C S26A.D107A 3.53 311 120°C S11<.D057A 4.10 157 160°C S21<.D057A 2.57 160°C S21<.D057A 2.57 160°C S21<.D057A 2.57 160°C S21<.D07A 3.58 140°C	S8B010Ta	2.86	190	543	1600 °C	S9F025Ta	2.50	948	2370	1600 °C	S20A005W	3.95	140	553	1800 °C
SBB015W 224 374 838 B00°C SIG-010W 286 B80°C SIG-010V 280 H00°C SIG-010V 281 H20 H00°C SIG-010V								586	879	1200 °C	S20A010Mo	1.27	129	164	1400 °C
SIGL-010Mb 127 214 305 1400°C S100 C S100 C S100°C S1	S8B015W		374	838	1800 °C	S9F-AO-W	1,40	635	889	1200 °C	S20A010Ta	2.61	129	337	1600 °C
SBC-0107IA 2.97 276 R00 R00*CC S10-005TA 4.26 R90*CC S21-005TM 2.10 Z00 R25 R80* SBC-0107A 2.97 R37 R1400*C S10-0107A 4.24 R94 R31 R00*CC S21-005TA 4.50 R38 R46 R90*C S21-005TA 4.50 R38 R46 R90*CC S21-005TA 4.50 R38 R46 R90*CC S21-005TA 4.50 R38 R46 R00*CC S21-010M0 1.47 R48 R68 R60*CC S21-010M0 1.47 R48 R68 R60*CC S21-010M0 1.48 R48 R60*CC S21-010M0 1.48 R48 R60*CC S21-010M0 1.48 R48 R60*CC S21-000M0 1.47 R44 R60 R0 S21 S21 S21 R00*CO S21-010M0 1.41 R00*CC S21-010M0 1.48 R44 R00*CC S21-010M0 1.48 R44 R00*CC S21-010M0 R14 R00*CC				306			2.03	170	345	1400 °C	S20A010W	2.90	196	568	1800 °C
SBC-010W 299 387 1107 1800 ⁻ 124 247 381 400 ⁻ 521-005Ma 4.51 183 621 600 ⁻ SBC-015Ta 2.37 337 789 1600 ⁻ S11-005Ta 4.56 S21-005W 3.26 144 489 1600 ⁻ SBC-AD-M 1.31 2.33 311 1200 ⁻ S11-1005Ta 4.10 180 781 1600 ⁻ S21-010Ta 2.27 188 681 1600 ⁻ SBD-010M 1.27 247 180 1600 ⁻ S31 1400 ⁻ S21-010Ta 2.27 180 160 114 120 277 120 500 140 151 241 154 277 120 500 152 150 140 150 141 160 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120 120														525	1800 °C
SBC-015Ma 107 300 321 400°C S10-016Ta 4.24 194 623 180°C S21-005Ta 4.50 184 468 180°C S21-005Ta 4.50 184 468 180°C S21-005Ta 4.50 180°C S21-005Ta 221-010Ma 1.47 144 468 180°C S21-010Ma 1.27 241 306 140°C S11-010Ma 1.28 282 749 160°C S21-010Ma 1.41 207 221 200°C S21-00FMa 1.51 122 180 140°C S21-00FMa 1.41 140°C S21-00FMa 1.41 140°C S21-00FMa 1.51 122 140°C S21-00FMa 1.51 122 140°C S22-00FMa 1.51 122 160°C S21-00FMa									331	1400 °C		2.11	123	260	1400 °C
SBC-016Ta 2.27 337 799 1600-CC S10-010W 3.28 81 1276 1800-CC S21-00FW 322 S21-010V 326 14 460 1800-CC SBC-AO-W 127 257 288 1000-CC S11-005Ta 4.10 160 781 1600-CC S21-010V 2.28 300 941 868 1800-CC S21-010V 2.81 AUO-W 1.47 243 300 941 1800 CC S21-AD-W 1.47 243 300 941 1800 CC S21-AD-W 1.47 241 300 941 1800 CC S21-AD-W 1.47 241 300 941 1800 CC S22-005Ta 2.94 150 411 1600 CC S22-010Va 1.58 1800 CC S22-010Va 1.58 1800 CC S22-010Va 1.58 1800 CC S22-010Va 1.58 1400 CC S22-010Va 1.58 1400 CC S22-010Va 1.58 1400 CC S22-010VA 2.58 1800 CC S22-010VA <								194	823	1600 °C	S21005Ta	4.50	138	621	1600 °C
SiGLAD-Min 131 253 331 1200°C 511.005Mo 151 165 166 322 1400°C 521.010Ma 127 271 180 581 1600°C 521.010Ta 127 271 180 581 1600°C 521.010Ta 288 304 1400°C 521.010Ta 288 304 1400°C 521.010Ta 288 304 1400°C 521.010Ta 288 304 1400°C 521.010Ta 281 1600°C 521.010Ta 281 1600°C 521.04.010Ta 281 1600°C 521.04.010Ta 281 1600°C 521.04.010Ta 281.015Ta 171 1800°C 521.04.010Ta 281.015Ta 180 271.1400°C 522.010Ta 281.010Ta 280 371.1400°C 522.010Ta 280 371.1400°C												3.26	144	469	1800 °C
SBC-AO-W 127 257 286 120°C S11-00Ta 41.0 180 788 160°C S21-01Ta 227 188 180 778 SBD-010Ta 2.97 282 778 1600°C S11-010Ta 2.88 228 374 1600°C S21-AC-M 1.47 204 300 440°C SBD-010Ta 2.97 787 110°C S11-010W 303 372 1127 1800°C S21-AC-M 1.47 204 300 120°C S12-AC-MM 1.47 120 188 1400°C S22-005Ta 2.24 150 1400°C S22-005Ta 2.24 150 140°C S22-017Ta 2.86 2.87 140°C S22-017Ta 2.88 2.80 410°C S22-017Ta 2.88 140°C S22-017Ta 2.88 140°C S22-017Ta 2.88 140°C S22-017Ta 2.88 140°C S22-017Ta 2.80 140°C S22-017Ta 2.80 140°C S22-017Ta 160°C S22-0107Ta													184	270	1400 °C
Seb_0107A L27 Z41 SSG HAO*C S11-010Ma L28 Z40 HAO+C S21-010W J28 Z00 HAO*C S21-010W J28 Z00 HAO*C S21-010W J28 Z07 HZO*C S21-010W J38 Z07 Z07 <thz07< th=""> <thz07< th=""> <thz07< th=""></thz07<></thz07<></thz07<>															
SBD-0107La 2.97 2.92 7/8 PGO*C S11-0107La 2.86 2.82 7/41 PGO*C S21-AO-M0 1.44 2.07 277 200°C SBD-015M0 1.11 300 333 1400°C S12A-005Ma 3.08 372 160°C S22-005Ma 1.54 122 188 1400°C SBD-015M0 1.10 303 1400°C S12A-005Ma 2.97 197 585 1600°C S22-005Ma 2.24 150 4.11 100°C S22-005Ma 2.24 150 4.11 100°C S22-005Ma 2.24 150 4.11 100°C S22-005Ma 2.24 170°C S22-010Ma 2.28 2.01 4.00°C S22-010Ma 2.28 2.01 4.00°C S22-010Ma 2.28 1.00°C S22-010Ma 2.08 1.00°C <td></td> <td>1800 °C</td>															1800 °C
SBD-010W 294 378 1111 180°C S11-010W 303 372 1127 180°C S21-AO-W 147 201°C SBD-015Mo 1.11 300 333 1400°C S12A-005Ma 1.46 181 291 140°C S22-005Ma 1.54 122 188 140°C S22-005Ma 1.54 122 181 140°C S22-005Ma 1.54 122 140°C S22-010Ma 1.09 180 207 140°C S22-010Ma 1.09 180 207 140°C S22-010Ma 1.55 180°C S128-010Ma .66 180°C S22-010Ma 2.58 2.83 140°C S22-010Ma 2.58 2.83 140°C S22-010Ma 1.88 2.93 140°C S22-010Ma 1.88 2.93 140°C S22-010Ma 1.88 2.95 140°C S22-010Ma 1.88 2.95 140°C S22-010Ma 1.68 2.95 140°C S22-010Ma 1.88 2.96 140°C S22-010Ma 1.80 </td <td></td> <td>207</td> <td>277</td> <td>1200 °C</td>													207	277	1200 °C
SBD-015TA C11 200 233 1400°C S12A_005Mo 1.46 181 241 140°C S22.005Mo 1.54 122 181 140°C SBD-015TA 2.37 325 770 1600°C S12A_005TA 2.97 197 586 1600°C S22.005TA 2.94 150 441 1600°C SBA_005Wa 383 583 1600°C S12A_011TA 2.22 273 668 1600°C S22.010TM 2.88 722 180°C SBA_005W 3.95 160°C S12A_005TA 1.82 203 400°C S22.010TM 2.85 722 180°C S9A_010W 2.84 194 551 180°C S12A_005Mo 1.32 106 140 140°C S23.010TA 1.88 280 140°C S23.0															
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S9F010M0 1.61 559 900 1400 °C S19B-1a 1.83 134 245 1600 °C S30010W 2.06 404 832 1800 °C															
	S9F010Mo	1.61	559	900	1400 °C	S19B-1a	1.83	134	245	1600 °C	S30010W	2.06	404	832	1800 °C

Power table for above sources is for reference only.

With evaporant added the power required could change significantly. Sources were tested without evaporant or crucibles installed.

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VIN KAROLA INSTRUMENTS

VACUUM EVAPORATION SOURCE POWER REQUIREMENT TABLE

Part #	Volts	Amps	Watte	s Temp.	Part #	Volts	Amps	Watts	Temp.	Part #	Volts	Amps	Watts	Temp.
S30A005W	2.6	400	1040	1800 °C	S39010Ta	1.95	165	322	1600 °C	SB-2	3.70	388	1436	1600 °C
S30A010W	1.5	444	666	1800 °C	S40005Mo	1.39	105	146	1400 °C	SB-2/SB-2A	2.91	398	1158	1600 °C
S31010Mo	1.08	305	329	1400 °C	S40005Ta	2.61	120	313	1600 °C	SB-3	2.08	366	761	1600 °C
S31010Ta	2.37	323	766	1600 °C	S40005W	2.71	155	420	1800 °C	SB-3/SB-3A	1.63	380	619	1600 °C
S31010W	1.92	392	753	1800 °C	S40010Ta	2.01	156	314	1600 °C	SB3-AO-Ta	1.54	295	454	1200 °C
S31A005Mo	.66	75	50	1400 °C	S42010Mo	1.58	249	393	1400 °C	SB3/SB3A-AO	1.49	345	514	1200 °C
S31A005Ta	1.24	83	103	1600 °C	S42010Ta	3.35	281	941	1600 °C	SB-4	3.57	438	1564	1600 °C
S31A005W	2.00	166	332	1800 °C	S42010W	2.82	269	759	1800 °C	SB-4/SB-4A	2.83	479	1356	1600 °C
S31A010Mo	.53	129	68	1400 °C	S42015Mo	1.27	310	394	1400 °C	SB-5	2.96	371	1098	1600 °C
S31A010Ta	.98	119	117	1600 °C	S42015Ta	2.61	328	856	1600 °C	SB-5/SB-5A	2.12	380	806	1600 °C
S31A010W	1.63	214	349	1800 °C	S42015W	2.57	508	1306	1800 °C	SB5-AO-Ta	2.20	314	691	1200 °C
S31A015Mo	.55	173	95	1400 °C	S42B-AO-Mo	1.35	262	354	1200 °C	SB5/SB5A-AO	1.63	334	544	1200 °C
S31A015Ta	1.07	155	166	1600 °C	S42B-AO-W	1.41	245	345	1200 °C	SB-6	3.58	280	1002	1600 °C
S31A015W	1.40	261	365	1800 °C	S43010Mo	1.52	317	482	1400 °C	SB-6/SB-6A	2.69	310	834	1600 °C
S32010W	2.38	738	1756	2000 °C	S43010Ta	3.48	338	1176	1600 °C	SB7-A,B,C005Mo	1.21	547	662	1400 °C
S33005Mo	1.46	, 30 94	137	2000 °C	S43010W	3.53	531	1874	1800 °C	SB7-A,B,C005Ta	2.28	572	1304	1600 °C
S33005Ta	3.27	94 94	307	1400 °C	S43015Mo	1.22	389	475	1400 °C	SB7-A,B,C010Mo	1.08	705	761	1400 °C
										SB7-A,B,C010Ta	2.10	680	1428	1600 °C
S33-,005W	3.26	144	469	1800 °C	S43015Ta	2.83	416	1177	1600 °C 1800 °C		1.44	850	1420	1400 °C
S34005Mo	1.70	123	209	1400 °C	S43015W	2.91	654	1903		SB8-A,B,C005Mo		880	2209	1400 °C
S34005Ta	3.82	135	516	1600 °C	S44005Mo	2.05	117	240	1400 °C	SB8-A,B,C005Ta	2.51		2209 1448	1400 °C
S34010Mo	1.25	169	211	1400 °C	S44005Ta	3.80	115	437	1600 °C	SB8-A,B,C010Mo	1.39	1042		
S34010Ta	2.75	177	487	1600 °C	S44010Mo	1.33	170	226	1400 °C	SB8-A,B,C010Ta	2.36	1115	2631	1600 °C
S34010W	2.66	259	689	1800 °C	S44010Ta	2.90	178	516	1600 °C	SB9-A,B,C005Mo	1.87	731	1367	1400 °C
S35005Mo	1.44	87	125	1400 °C	S44010W	2.87	260	746	1800 °C	SB9-A,B,C005Ta	3.44	750	2580	1600 °C
S35005Ta	3.10	91	282	1600 °C	S44015Mo	1.06	207	219	1400 °C	SB9-A,B,C010Mo	1.62	890	1442	1400 °C
S35005W	3.37	140	472	1800 °C	S44015Ta	2.38	220	524	1600 °C	SB9-A,B,C010Ta	3.40	998	3393	1600 °C
S35010Mo	1.05	124	130	1400 °C	S44015W	2.31	327	755	1800 °C	SB10-A,B,C005Mo		1222	2578	1400 °C
S35010Ta	2.13	134	285	1600 °C	S45005Mo	2.11	176	371	1400 °C	SB10-A,B,C005Ta	3.66	1220	4465	1600 °C
S35010W	2.26	207	468	1800 °C	S45005Ta	4.60	189	869	1600 °C	SB10-A,B,C010Mc		1530	3091	1400 °C
S35A-AO-Mo	1.05	144	151	1200 °C	S45010Mo	1.45	249	361	1400 °C	SB10-A,B,C010Ta	3.37	1550	5224	1600 °C
S35A-AO-W	.95	136	129	1200 °C	S45010Ta	3.16	257	812	1600 °C	SM-8	1.08	255	275	1200 °C
S35B-AO-Mo	.90	137	123	1200 °C	S45010W	3.39	394	1336	1800 °C	SM-9	1.00	242	242	1200 °C
S35B-AO-W	.89	130	116	1200 °C	S45015Mo	1.29	310	400	1400 °C	SM-10	1.25	226	282	1200 °C
S36010Mo	1.33	251	334	1400 °C	S45015Ta	2.55	320	816	1600 °C	SM-11	1.26	236	297	1200 °C
S36010Ta	2.98	250	745	1600 °C	S45015W	2.72	503	1368	1800 °C	SM-12	1.36	283	385	1200 °C
S36010W	3.01	391	1177	1800 °C	S45B-AO-Mo	1.27	264	335	1200 °C	SM-13	1.60	318	509	1200 °C
S36015Ta	2.27	322	731	1600 °C	S45B-AO-W	1.43	264	378	1200 °C	SM-14	1.66	340	564	1200 °C
S36-AO-Mo	1.34	289	387	1200 °C	S46005Mo	2.10	207	435	1400 °C	SM-15	1.70	349	593	1200 °C
S36-AO-W	1.25	268	335	1200 °C	S46005Ta	4.87	221	1076	1600 °C	SM-16	2.06	357	735	1200 °C
S37005Mo	1.84	201	370	1400 °C	S46010Mo	1.49	293	437	1400 °C	SM-17	1.86	327	608	1200 °C
S37005Ta	4.26	222	946	1600 °C	S46010Ta	3.20	306	979	1600 °C	SO-10	1.40	257	360	1200 °C
S37010Mo	1.30	289	376	1400 °C	S46010W	3.34	485	1620	1800 °C	SO-11	1.40	256	358	1200 °C
S37010Ta	3.21	319	1024	1600 °C	S47010Mo	1.18	142	168	1400 °C	SO-20	.86	333	286	1200 °C
S37-AO-Mo	1.23	326	401	1200 °C	S47010Ta	2.59	144	373	1600 °C	SO-21	.91	328	298	1200 °C
S38005Mo	1.77	114	202	1400 °C	S47010W	2.87	212	608	1800 °C	SO-22	1.34	246	330	1200 °C
S38005Ta	4.01	114	457	1600 °C	S47015Mo	1.00	179	179	1400°C	SO-23	1.31	236	309	1200 °C
S38010Mo	1.26	164	207	1400 °C	S47015Ta	2.06	190	391	1600 °C	SO-24	1.67	264	441	1200 °C
S38010Ta	2.70	197	532	1600 °C	S47015W	2.18	287	626	1800 °C	SO-25	1.58	272	430	1200 °C
S38010W	2.77	254	704	1800 °C	S47020Ta	1.91	210	401	1600 °C	SO-26	1.62	271	439	1200 °C
S38A-AO-Mo	1.22	181	221	1200 °C	S470201a S47020W	2.00	333	666	1800 °C	SO-32	1.23	217	267	1200 °C
S38A-AO-W	1.22	169	203	1200 °C	S48010Mo	1.24	75	93	1400 °C	SO-34	1.27	289	367	1200 °C
				1200 °C	S48010Ta	2.41	75 81	195	1400 °C	SO-36	1.30	373	485	1200 °C
S38B-AO-Mo	1.04	167	174			2.41	115	195 324	1800 °C	CRW-1	1.05	78	400	1200 °C
S38B-AO-W	1.04	156	162	1200 °C	S48010W				1600 °C	CRW-2	2,02	78 78	158	1800 °C
S39005Mo	1.32	100		1400 °C	SB-1	4.14	707				2.02	70 77	185	1800 °C
S39005Ta	2.72	106	288	1600 °C	SB-1/SB-1A	3.20	749	2397	1600 °C	CRW-3	2.40	11	100	1000 0

Power table for above sources is for reference only.

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