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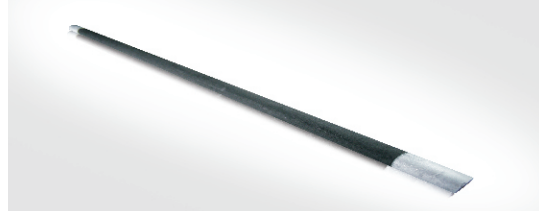
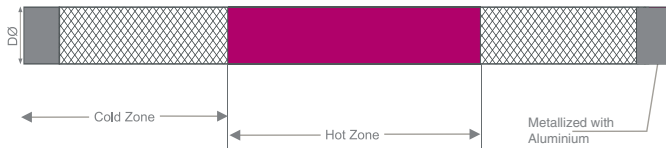
**T E C H N I C A L**

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**D A T A S H E E T**

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## RANGE OF SIZES AND ELECTRICAL PROPERTIES FOR ALPHA ROD TYPE ELEMENTS.



Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms
10	125	300	39	1.92	0.022	1.942
	125	400	39	1.92	0.035	1.955
	125	500	39	1.92	0.048	1.968
	150	350	47	2.31	0.033	2.343
	150	450	47	2.31	0.049	2.359
	150	500	47	2.31	0.058	2.368
	175	350	55	2.64	0.031	2.671
	175	450	55	2.64	0.048	2.688
	175	550	55	2.64	0.066	2.706
	200	400	63	3.02	0.043	3.063
	200	450	63	3.02	0.054	3.074
	200	550	63	3.02	0.076	3.096
	225	400	71	3.51	0.040	3.550
	225	500	71	3.51	0.064	3.574
	225	600	71	3.51	0.088	3.598
	250	450	79	3.68	0.052	3.732
	250	550	79	3.68	0.079	3.759
	250	600	79	3.68	0.092	3.772
	300	500	94	4.39	0.063	4.453
	300	600	94	4.39	0.094	4.484
	300	650	94	4.39	0.110	4.500
12	125	400	47	1.14	0.017	1.157
	125	500	47	1.14	0.023	1.163
	125	550	47	1.14	0.026	1.166
	125	600	47	1.14	0.029	1.169
	150	450	57	1.36	0.020	1.380
	150	500	57	1.36	0.024	1.384
	150	550	57	1.36	0.027	1.387
	150	650	57	1.36	0.034	1.394
	175	450	66	1.53	0.022	1.552
	175	550	66	1.53	0.030	1.560
	175	600	66	1.53	0.034	1.564
	175	650	66	1.53	0.038	1.568
	200	500	75	1.75	0.026	1.776
	200	550	75	1.75	0.031	1.781
	200	600	75	1.75	0.035	1.785
	200	700	75	1.75	0.044	1.794
	225	500	85	1.96	0.028	1.988
	225	600	85	1.96	0.038	1.998
	225	650	85	1.96	0.044	2.004
	225	700	85	1.96	0.049	2.009
	250	550	94	2.14	0.032	2.172
250	600	94	2.14	0.038	2.178	
250	650	94	2.14	0.043	2.183	
250	750	94	2.14	0.054	2.194	
300	600	113	2.53	0.038	2.568	
300	650	113	2.53	0.044	2.574	
300	700	113	2.53	0.050	2.580	
300	800	113	2.53	0.063	2.593	

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
ALPHA ROD TYPE ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms
12	350	650	132	2.93	0.044	2.974
	350	700	132	2.93	0.051	2.981
	350	750	132	2.93	0.058	2.988
	350	850	132	2.93	0.073	3.003
	400	700	151	3.28	0.049	3.329
	400	750	151	3.28	0.057	3.337
	400	800	151	3.28	0.066	3.346
	400	900	151	3.28	0.082	3.362
	450	750	170	3.75	0.056	3.806
	450	800	170	3.75	0.066	3.816
	450	850	170	3.75	0.075	3.825
	450	950	170	3.75	0.094	3.844
	500	800	188	4.14	0.062	4.202
	500	850	188	4.14	0.073	4.213
	500	900	188	4.14	0.083	4.223
	500	1000	188	4.14	0.104	4.244
16	200	500	100	1.13	0.017	1.147
	200	600	100	1.13	0.022	1.152
	200	650	100	1.13	0.025	1.155
	200	700	100	1.13	0.028	1.158
	225	550	113	1.26	0.020	1.280
	225	600	113	1.26	0.023	1.283
	225	650	113	1.26	0.026	1.286
	225	750	113	1.26	0.032	1.292
	250	550	126	1.38	0.021	1.401
	250	650	126	1.38	0.028	1.408
	250	700	126	1.38	0.032	1.412
	250	750	126	1.38	0.035	1.415
	300	600	151	1.64	0.025	1.665
	300	700	151	1.64	0.033	1.673
	300	750	151	1.64	0.037	1.677
	300	800	151	1.64	0.041	1.681
	350	650	176	1.90	0.029	1.929
	350	750	176	1.90	0.038	1.938
	350	800	176	1.90	0.043	1.943
	350	850	176	1.90	0.048	1.948
	400	700	201	2.15	0.032	2.182
	400	800	201	2.15	0.043	2.193
	400	850	201	2.15	0.049	2.199
	400	900	201	2.15	0.054	2.204
	450	750	226	2.41	0.036	2.446
	450	850	226	2.41	0.048	2.458
	450	900	226	2.41	0.054	2.464
	450	950	226	2.41	0.060	2.470
	500	800	251	2.67	0.040	2.710
	500	900	251	2.67	0.053	2.723
	500	950	251	2.67	0.060	2.730
	500	1000	251	2.67	0.067	2.737
550	850	276	2.92	0.044	2.964	
550	950	276	2.92	0.058	2.978	
550	1000	276	2.92	0.066	2.986	
550	1050	276	2.92	0.073	2.993	
600	900	301	3.18	0.048	3.228	
600	1000	301	3.18	0.064	3.244	
600	1050	301	3.18	0.072	3.252	
600	1100	301	3.18	0.080	3.260	
19	200	500	119	0.79	0.012	0.802
	200	600	119	0.79	0.016	0.806
	200	650	119	0.79	0.018	0.808
	200	700	119	0.79	0.020	0.810
	225	550	134	0.88	0.014	0.894
	225	600	134	0.88	0.016	0.896
	225	650	134	0.88	0.018	0.898
	225	750	134	0.88	0.022	0.902
	250	550	149	0.96	0.014	0.974
	250	650	149	0.96	0.019	0.979
	250	700	149	0.96	0.022	0.982
	250	750	149	0.96	0.024	0.984

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
ALPHA ROD TYPE ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms
19	300	600	179	1.13	0.017	1.147
	300	700	179	1.13	0.022	1.152
	300	750	179	1.13	0.025	1.155
	300	800	179	1.13	0.028	1.158
	350	650	209	1.31	0.020	1.330
	350	750	209	1.31	0.026	1.336
	350	800	209	1.31	0.029	1.339
	350	850	209	1.31	0.033	1.343
	400	700	239	1.48	0.022	1.502
	400	800	239	1.48	0.030	1.510
	400	850	239	1.48	0.033	1.513
	400	900	239	1.48	0.037	1.517
	450	750	268	1.65	0.025	1.675
	450	850	268	1.65	0.033	1.683
	450	900	268	1.65	0.037	1.687
	450	950	268	1.65	0.041	1.691
	500	800	298	1.83	0.027	1.857
	500	900	298	1.83	0.036	1.866
	500	950	298	1.83	0.041	1.871
	500	1000	298	1.83	0.046	1.876
	550	850	328	2.00	0.030	2.030
	550	950	328	2.00	0.040	2.040
	550	1000	328	2.00	0.045	2.045
	550	1050	328	2.00	0.050	2.050
	600	900	358	2.17	0.032	2.202
	600	1000	358	2.17	0.043	2.213
	600	1050	358	2.17	0.049	2.219
	600	1100	358	2.17	0.054	2.224
	650	950	388	2.36	0.035	2.395
	650	1050	388	2.36	0.047	2.407
	650	1100	388	2.36	0.053	2.413
	650	1150	388	2.36	0.059	2.419
	700	1000	418	2.52	0.038	2.558
	700	1100	418	2.52	0.050	2.570
	700	1150	418	2.52	0.057	2.577
	700	1200	418	2.52	0.063	2.583
	750	1050	447	2.69	0.040	2.730
	750	1150	447	2.69	0.054	2.744
	750	1200	447	2.69	0.060	2.750
	750	1250	447	2.69	0.067	2.757
	800	1100	477	2.88	0.043	2.923
	800	1200	477	2.88	0.058	2.938
	800	1250	477	2.88	0.065	2.945
	800	1300	477	2.88	0.072	2.952
850	1150	507	3.06	0.042	3.102	
850	1250	507	3.06	0.056	3.116	
850	1300	507	3.06	0.063	3.123	
850	1400	507	3.06	0.077	3.137	
25	300	800	236	0.66	0.010	0.670
	300	850	236	0.66	0.011	0.671
	300	1100	236	0.66	0.017	0.677
	350	850	275	0.76	0.012	0.772
	350	900	275	0.76	0.013	0.773
	350	1150	275	0.76	0.019	0.779
	400	900	314	0.86	0.013	0.873
	400	950	314	0.86	0.015	0.875
	400	1200	314	0.86	0.022	0.882
	450	950	353	0.96	0.015	0.975
	450	1000	353	0.96	0.015	0.975
	450	1250	353	0.96	0.024	0.984
	500	1000	393	1.00	0.016	1.016
	500	1050	393	1.00	0.017	1.017
	500	1300	393	1.00	0.025	1.025
	550	1050	432	1.16	0.018	1.178
	550	1100	432	1.16	0.020	1.180
	550	1350	432	1.16	0.029	1.189

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
ALPHA ROD TYPE ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance	
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms	
25	600	1100	471	1.24	0.019	1.259	
	600	1150	471	1.24	0.021	1.261	
	600	1400	471	1.24	0.031	1.271	
	650	1150	510	1.37	0.021	1.391	
	650	1200	510	1.37	0.024	1.394	
	650	1450	510	1.37	0.034	1.404	
	700	1200	550	1.47	0.023	1.493	
	700	1250	550	1.47	0.025	1.495	
	700	1500	550	1.47	0.037	1.507	
	750	1250	589	1.57	0.025	1.595	
	750	1300	589	1.57	0.027	1.597	
	750	1550	589	1.57	0.039	1.609	
	800	1300	628	1.65	0.038	1.688	
	800	1350	628	1.65	0.041	1.691	
	850	1350	667	1.75	0.040	1.790	
	850	1400	667	1.75	0.044	1.794	
	32	350	850	352	0.51	0.008	0.518
		350	900	352	0.51	0.009	0.519
350		1150	352	0.51	0.013	0.523	
400		900	402	0.58	0.009	0.589	
400		950	402	0.58	0.010	0.590	
400		1200	402	0.58	0.015	0.595	
450		950	452	0.64	0.010	0.650	
450		1000	452	0.64	0.011	0.651	
450		1250	452	0.64	0.016	0.656	
500		1000	502	0.72	0.011	0.731	
500		1050	502	0.72	0.012	0.732	
500		1300	502	0.72	0.018	0.738	
550		1050	553	0.79	0.012	0.802	
550		1100	553	0.79	0.014	0.804	
550		1350	553	0.79	0.020	0.810	
600		1100	603	0.86	0.013	0.873	
600		1150	603	0.86	0.015	0.875	
600		1400	603	0.86	0.022	0.882	
650		1150	653	0.93	0.015	0.945	
650		1200	653	0.93	0.016	0.946	
650		1450	653	0.93	0.023	0.953	
700		1200	703	1.00	0.016	1.016	
700		1250	703	1.00	0.017	1.017	
700		1500	703	1.00	0.025	1.025	
750		1250	754	1.07	0.017	1.087	
750		1300	754	1.07	0.018	1.088	
750		1550	754	1.07	0.027	1.097	
800		1300	804	1.13	0.018	1.148	
800		1350	804	1.13	0.019	1.149	
800		1600	804	1.13	0.028	1.158	
850	1350	854	1.20	0.019	1.219		
850	1450	854	1.20	0.023	1.223		
850	1650	854	1.20	0.030	1.230		
900	1400	904	1.27	0.020	1.290		
900	1500	904	1.27	0.024	1.294		
900	1700	904	1.27	0.032	1.302		
950	1450	955	1.34	0.021	1.361		
950	1500	955	1.34	0.023	1.363		
950	1750	955	1.34	0.034	1.374		
1000	1500	1005	1.40	0.022	1.422		
1000	1550	1005	1.40	0.024	1.424		
1000	1800	1005	1.40	0.035	1.435		

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
ALPHA ROD TYPE ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance	
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms	
32	1050	1550	1055	1.48	0.023	1.503	
	1050	1650	1055	1.48	0.028	1.508	
	1050	1850	1055	1.48	0.037	1.517	
	1100	1600	1105	1.54	0.024	1.564	
	1100	1700	1105	1.54	0.029	1.569	
	1100	1900	1105	1.54	0.039	1.579	
	1150	1650	1156	1.61	0.025	1.635	
	1150	1750	1156	1.61	0.030	1.640	
	1150	1950	1156	1.61	0.040	1.650	
	38	400	900	477	0.41	0.006	0.416
		400	950	477	0.41	0.007	0.417
		400	1200	477	0.41	0.010	0.420
450		950	537	0.46	0.007	0.467	
450		1000	537	0.46	0.008	0.468	
450		1250	537	0.46	0.012	0.472	
500		1000	597	0.50	0.008	0.508	
500		1050	597	0.50	0.009	0.509	
500		1300	597	0.50	0.013	0.513	
550		1050	656	0.56	0.009	0.569	
550		1100	656	0.56	0.010	0.570	
550		1350	656	0.56	0.014	0.574	
600		1100	716	0.60	0.009	0.609	
600		1150	716	0.60	0.010	0.610	
600		1400	716	0.60	0.015	0.615	
650		1150	776	0.64	0.010	0.650	
650		1200	776	0.64	0.011	0.651	
650		1450	776	0.64	0.016	0.656	
700		1200	835	0.69	0.010	0.700	
700		1250	835	0.69	0.012	0.702	
700		1500	835	0.69	0.017	0.707	
750		1250	895	0.74	0.012	0.752	
750		1300	895	0.74	0.013	0.753	
750		1550	895	0.74	0.019	0.759	
800		1300	955	0.78	0.012	0.792	
800		1350	955	0.78	0.013	0.793	
800		1600	955	0.78	0.020	0.800	
850		1350	1014	0.83	0.013	0.843	
850		1450	1014	0.83	0.016	0.846	
850		1650	1014	0.83	0.021	0.851	
900		1400	1074	0.87	0.014	0.884	
900		1500	1074	0.87	0.016	0.886	
900		1700	1074	0.87	0.022	0.892	
950		1450	1134	0.92	0.014	0.934	
950		1500	1134	0.92	0.016	0.936	
950		1750	1134	0.92	0.023	0.943	
1000		1500	1193	0.97	0.015	0.985	
1000		1550	1193	0.97	0.017	0.987	
1000		1800	1193	0.97	0.024	0.994	
1050		1550	1253	1.02	0.016	1.036	
1050		1650	1253	1.02	0.019	1.039	
1050		1850	1253	1.02	0.026	1.046	

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
ALPHA ROD TYPE ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance	
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms	
38	1100	1600	1313	1.07	0.017	1.087	
	1100	1700	1313	1.07	0.020	1.090	
	1100	1900	1313	1.07	0.027	1.097	
	1150	1650	1372	1.11	0.017	1.127	
	1150	1750	1372	1.11	0.021	1.131	
	1150	1950	1372	1.11	0.028	1.138	
	1200	1700	1432	1.17	0.018	1.188	
	1200	1800	1432	1.17	0.022	1.192	
	1200	2000	1432	1.17	0.029	1.199	
	1250	1750	1492	1.21	0.019	1.229	
	1250	1850	1492	1.21	0.023	1.233	
	1250	2050	1492	1.21	0.030	1.240	
	1300	1800	1551	1.26	0.020	1.280	
	1300	1900	1551	1.26	0.023	1.283	
	1300	2100	1551	1.26	0.032	1.292	
	1350	1850	1611	1.31	0.020	1.330	
	1350	1950	1611	1.31	0.024	1.334	
	1350	2150	1611	1.31	0.033	1.343	
	1400	2000	1670	1.36	0.026	1.386	
	1400	2200	1670	1.36	0.034	1.394	
	44.5	500	1000	699	0.38	0.006	0.386
		500	1050	699	0.38	0.006	0.386
		500	1300	699	0.38	0.010	0.390
		550	1050	769	0.41	0.006	0.416
550		1100	769	0.41	0.007	0.417	
550		1350	769	0.41	0.010	0.420	
600		1100	838	0.45	0.007	0.457	
600		1150	838	0.45	0.008	0.458	
600		1400	838	0.45	0.011	0.461	
650		1150	908	0.48	0.008	0.488	
650		1200	908	0.48	0.008	0.488	
650		1450	908	0.48	0.012	0.492	
700		1200	978	0.52	0.008	0.528	
700		1250	978	0.52	0.009	0.529	
700		1500	978	0.52	0.013	0.533	
750		1250	1048	0.55	0.009	0.559	
750		1300	1048	0.55	0.009	0.559	
750		1550	1048	0.55	0.014	0.564	
800		1300	1118	0.59	0.009	0.599	
800		1350	1118	0.59	0.010	0.600	
800		1600	1118	0.59	0.015	0.605	
850		1350	1188	0.62	0.010	0.630	
850		1450	1188	0.62	0.012	0.632	
850		1650	1188	0.62	0.016	0.636	
900		1400	1258	0.66	0.010	0.670	
900		1500	1258	0.66	0.012	0.672	
900		1700	1258	0.66	0.017	0.677	
950		1450	1327	0.69	0.011	0.701	
950		1500	1327	0.69	0.012	0.702	
950		1750	1327	0.69	0.017	0.707	

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
ALPHA ROD TYPE ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms
44.5	1000	1500	1397	0.73	0.011	0.741
	1000	1550	1397	0.73	0.013	0.743
	1000	1800	1397	0.73	0.018	0.748
	1050	1550	1467	0.76	0.012	0.772
	1050	1650	1467	0.76	0.014	0.774
	1050	1850	1467	0.76	0.019	0.779
	1100	1600	1537	0.80	0.013	0.813
	1100	1700	1537	0.80	0.015	0.815
	1100	1900	1537	0.80	0.020	0.820
	1150	1650	1607	0.84	0.013	0.853
	1150	1750	1607	0.84	0.016	0.856
	1150	1950	1607	0.84	0.021	0.861
	1200	1700	1677	0.87	0.014	0.884
	1200	1800	1677	0.87	0.016	0.886
	1200	2000	1677	0.87	0.022	0.892
	1250	1750	1747	0.90	0.014	0.914
	1250	1850	1747	0.90	0.017	0.917
	1250	2050	1747	0.90	0.023	0.923
	1300	1800	1816	0.94	0.015	0.955
	1300	1900	1816	0.94	0.018	0.958
	1300	2100	1816	0.94	0.024	0.964
	1350	1850	1886	0.97	0.015	0.985
	1350	1950	1886	0.97	0.018	0.988
	1350	2150	1886	0.97	0.024	0.994
	1400	1900	1956	1.00	0.016	1.016
	1400	2000	1956	1.00	0.019	1.019
	1400	2200	1956	1.00	0.025	1.025
	1450	1950	2026	1.04	0.016	1.056
	1450	2050	2026	1.04	0.020	1.060
	1450	2250	2026	1.04	0.026	1.066
1500	2000	2096	1.08	0.017	1.097	
1500	2100	2096	1.08	0.020	1.100	
1500	2300	2096	1.08	0.027	1.107	
1550	2050	2166	1.11	0.017	1.127	
1550	2150	2166	1.11	0.021	1.131	
1550	2350	2166	1.11	0.028	1.138	
1600	2100	2236	1.14	0.018	1.158	
1600	2200	2236	1.14	0.021	1.161	
1600	2400	2236	1.14	0.029	1.169	
1650	2150	2306	1.17	0.018	1.188	
1650	2250	2306	1.17	0.022	1.192	
1650	2450	2306	1.17	0.029	1.199	
54	500	1050	848	0.33	0.005	0.335
	500	1100	848	0.33	0.006	0.336
	500	1350	848	0.33	0.008	0.338
	550	1100	933	0.36	0.006	0.366
	550	1150	933	0.36	0.006	0.366
	550	1400	933	0.36	0.009	0.369
	600	1150	1017	0.39	0.006	0.396
	600	1200	1017	0.39	0.007	0.397
	600	1450	1017	0.39	0.010	0.400



**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
ALPHA ROD TYPE ELEMENTS.**

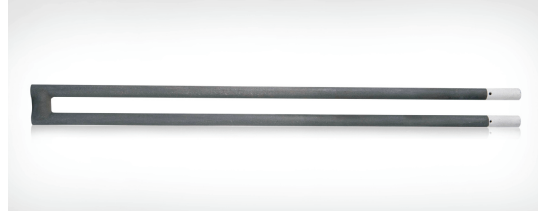
Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms
	650	1200	1102	0.43	0.007	0.437
	650	1250	1102	0.43	0.008	0.438
	650	1500	1102	0.43	0.011	0.441
	700	1250	1187	0.46	0.007	0.467
	700	1300	1187	0.46	0.008	0.468
	700	1550	1187	0.46	0.012	0.472
	750	1300	1272	0.49	0.008	0.498
	750	1350	1272	0.49	0.008	0.498
	750	1600	1272	0.49	0.012	0.502
	800	1350	1356	0.52	0.008	0.528
	800	1450	1356	0.52	0.010	0.530
	800	1650	1356	0.52	0.013	0.533
	850	1400	1441	0.55	0.009	0.559
	850	1500	1441	0.55	0.010	0.560
	850	1700	1441	0.55	0.014	0.564
	900	1450	1526	0.58	0.009	0.589
	900	1750	1526	0.58	0.015	0.595
	950	1450	1611	0.61	0.009	0.619
	950	1600	1611	0.61	0.012	0.622
	950	1800	1611	0.61	0.015	0.625
	1000	1550	1696	0.64	0.010	0.650
	1000	1650	1696	0.64	0.012	0.652
	1000	1850	1696	0.64	0.016	0.656
	1050	1600	1780	0.68	0.011	0.691
	1050	1700	1780	0.68	0.013	0.693
	1050	1900	1780	0.68	0.017	0.697
	1100	1650	1865	0.71	0.014	0.724
	1100	1750	1865	0.71	0.014	0.724
	1100	1950	1865	0.71	0.018	0.728
	1150	1700	1950	0.74	0.012	0.752
	1150	1800	1950	0.74	0.014	0.754
	1150	2000	1950	0.74	0.019	0.759
	1200	1750	2035	0.77	0.012	0.782
	1200	1850	2035	0.77	0.015	0.785
	1200	2050	2035	0.77	0.019	0.789
	1250	1800	2120	0.80	0.013	0.813
	1250	1900	2120	0.80	0.015	0.815
	1250	2100	2120	0.80	0.020	0.820
	1300	1850	2204	0.83	0.013	0.843
	1300	1950	2204	0.83	0.016	0.846
	1300	2150	2204	0.83	0.021	0.851
	1350	1900	2289	0.86	0.013	0.873
	1350	2000	2289	0.86	0.016	0.876
	1350	2200	2289	0.86	0.022	0.882
	1400	1950	2374	0.89	0.014	0.904
	1400	2050	2374	0.89	0.017	0.907
	1400	2250	2374	0.89	0.022	0.912
	1450	2000	2459	0.92	0.015	0.935
	1450	2100	2459	0.92	0.018	0.938
	1450	2300	2459	0.92	0.023	0.943

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
ALPHA ROD TYPE ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms
54	1500	2050	2543	0.95	0.015	0.965
	1500	2100	2543	0.95	0.017	0.967
	1500	2350	2543	0.95	0.024	0.974
	1550	2100	2628	0.97	0.015	0.985
	1550	2200	2628	0.97	0.018	0.988
	1550	2400	2628	0.97	0.024	0.994
	1600	2150	2713	1.00	0.016	1.016
	1600	2250	2713	1.00	0.019	1.019
	1600	2450	2713	1.00	0.025	1.025
	1650	2200	2798	1.03	0.016	1.046
	1650	2300	2798	1.03	0.019	1.049
	1650	2550	2798	1.03	0.026	1.056
	1700	2250	2883	1.06	0.017	1.077
	1700	2350	2883	1.06	0.020	1.080
	1700	2550	2883	1.06	0.027	1.087
	1750	2300	2967	1.09	0.018	1.108
	1750	2400	2967	1.09	0.021	1.111
	1750	2600	2967	1.09	0.027	1.117
	1800	2350	3052	1.12	0.018	1.138
	1800	2450	3052	1.12	0.021	1.141
	1800	2650	3052	1.12	0.028	1.148

**NOTE:-**Longer cold zones or hot zone can be supplied. Resistance can be interpolated for different sizes.  
Resistance Tolerance 20%.

## RANGE OF SIZES AND ELECTRICAL PROPERTIES FOR “U” TYPE ELEMENTS.



Diameter		Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance	
in mm		in mm	in mm	Sq. cm	in ohms	in ohms	in ohms	
14	Bridge Thickness 25mm	Minimum Distance between leg Centres 35mm	200	500	176	2.88	0.043	2.92
			200	550	176	2.88	0.050	2.93
			200	600	176	2.88	0.058	2.94
			200	700	176	2.88	0.072	2.95
		Maximum Distance between leg centres 75mm	225	500	198	3.22	0.047	3.27
			225	600	198	3.22	0.064	3.28
			225	650	198	3.22	0.072	3.29
			225	700	198	3.22	0.081	3.30
			250	550	220	3.52	0.053	3.57
			250	600	220	3.52	0.062	3.58
	Minimum Distance between leg Centres 35mm	250	650	220	3.52	0.070	3.59	
		250	750	220	3.52	0.088	3.61	
		Maximum Distance between leg centres 75mm	300	600	264	4.17	0.070	4.24
			300	650	264	4.17	0.081	4.25
			300	700	264	4.17	0.093	4.26
			300	750	264	4.17	0.104	4.27
		350	550	308	4.83	0.060	4.89	
		350	650	308	4.83	0.091	4.92	
		350	700	308	4.83	0.106	4.94	
		350	750	308	4.83	0.121	4.95	
16	Bridge Thickness 25mm	Minimum Distance between leg Centres 35mm	200	500	201	2.26	0.034	2.29
			200	600	201	2.26	0.045	2.31
			200	650	201	2.26	0.051	2.31
			200	700	201	2.26	0.057	2.32
		Maximum Distance between leg centres 75mm	225	550	226	2.52	0.039	2.56
			225	600	226	2.52	0.045	2.57
			225	650	226	2.52	0.051	2.57
			225	750	226	2.52	0.063	2.58
			250	550	251	2.76	0.041	2.80
			250	650	251	2.76	0.055	2.82
	Minimum Distance between leg Centres 35mm	250	700	251	2.76	0.062	2.82	
		250	750	251	2.76	0.069	2.83	
		Maximum Distance between leg centres 75mm	300	600	301	3.28	0.049	3.33
			300	700	301	3.28	0.066	3.35
			300	750	301	3.28	0.074	3.35
			300	800	301	3.28	0.082	3.36
		350	650	352	3.80	0.057	3.86	
		350	750	352	3.80	0.076	3.88	
		350	800	352	3.80	0.086	3.89	
		350	850	352	3.80	0.095	3.90	
400	700	402	4.30	0.072	4.37			
400	800	402	4.30	0.096	4.40			
400	850	402	4.30	0.108	4.41			
Maximum Distance between leg centres 75mm	450	750	452	4.82	0.080	4.90		
	450	850	452	4.82	0.107	4.93		
	450	900	452	4.82	0.121	4.94		
	500	700	502	5.34	0.067	5.41		
	500	800	502	5.34	0.100	5.44		
	500	900	502	5.34	0.134	5.47		

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
“U” TYPE ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance			
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms			
19	Bridge Thickness 28mm	Minimum Distance between leg Centres 45mm	Maximum Distance between leg centres 75mm	200	500	239	1.58	0.024	1.60
				200	600	239	1.58	0.032	1.61
				200	650	239	1.58	0.036	1.62
				200	700	239	1.58	0.040	1.62
				225	550	268	1.76	0.027	1.79
				225	600	268	1.76	0.031	1.79
				225	650	268	1.76	0.036	1.80
				225	750	268	1.76	0.044	1.80
				250	550	298	1.92	0.029	1.95
				250	650	298	1.92	0.038	1.96
		250	700	298	1.92	0.043	1.96		
		250	750	298	1.92	0.048	1.97		
		300	600	358	2.26	0.034	2.29		
		300	700	358	2.26	0.045	2.31		
		300	750	358	2.26	0.051	2.31		
		300	800	358	2.26	0.057	2.32		
		350	650	418	2.62	0.039	2.66		
		350	750	418	2.62	0.052	2.67		
		350	800	418	2.62	0.059	2.68		
		350	850	418	2.62	0.066	2.69		
	400	700	477	2.96	0.044	3.00			
	400	800	477	2.96	0.059	3.02			
	400	850	477	2.96	0.067	3.03			
	400	900	477	2.96	0.074	3.03			
	450	750	537	3.30	0.050	3.35			
	450	850	537	3.30	0.066	3.37			
	450	900	537	3.30	0.074	3.37			
	450	950	537	3.30	0.083	3.38			
	500	800	597	3.66	0.055	3.71			
	500	900	597	3.66	0.073	3.73			
	500	950	597	3.66	0.082	3.74			
	500	1000	597	3.66	0.092	3.75			
	550	850	656	4.00	0.067	4.07			
	550	950	656	4.00	0.089	4.09			
	550	1000	656	4.00	0.100	4.10			
	600	900	716	4.34	0.072	4.41			
	600	1000	716	4.34	0.096	4.44			
	600	1050	716	4.34	0.109	4.45			
	650	850	776	4.72	0.059	4.78			
	650	950	776	4.72	0.089	4.81			
650	1050	776	4.72	0.118	4.84				
700	900	835	5.04	0.072	5.11				
700	1050	835	5.04	0.126	5.17				
25	Bridge Thickness 38mm	Minimum Distance between leg Centres 55mm	Maximum Distance between leg centres 95mm	300	800	471	1.32	0.033	1.35
				300	850	471	1.32	0.036	1.36
				300	1100	471	1.32	0.053	1.37
				350	850	550	1.52	0.038	1.56
				350	900	550	1.52	0.042	1.56
				350	1150	550	1.52	0.061	1.58
				400	900	628	1.72	0.027	1.75
				400	950	628	1.72	0.030	1.75
				400	1200	628	1.72	0.043	1.76
				450	950	707	1.92	0.030	1.95
		450	1000	707	1.92	0.033	1.95		
		450	1250	707	1.92	0.048	1.97		
		500	1000	785	2.10	0.048	2.15		
		500	1050	785	2.10	0.053	2.15		
		550	1050	864	2.30	0.052	2.35		
		550	1100	864	2.30	0.058	2.36		
		600	1100	942	2.46	0.056	2.52		
		600	1150	942	2.46	0.062	2.52		
		650	1150	1021	2.70	0.061	2.76		
		650	1200	1021	2.70	0.068	2.77		

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
“U” TYPE ELEMENTS.**

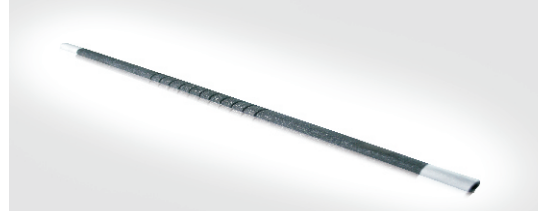
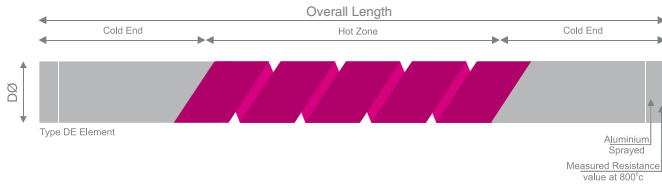
Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms
25	700	1200	1099	2.92	0.066	2.99
	700	1250	1099	2.92	0.073	2.99
	750	1200	1178	3.08	0.069	3.15
	750	1250	1178	3.08	0.077	3.16
	350	850	703	1.02	0.016	1.04
	350	900	703	1.02	0.018	1.04
32	350	1150	703	1.02	0.026	1.05
	400	900	804	1.16	0.018	1.18
	400	950	804	1.16	0.020	1.18
	400	1200	804	1.16	0.029	1.19
	450	950	904	1.28	0.020	1.30
	450	1050	904	1.28	0.024	1.30
	450	1250	904	1.28	0.032	1.31
	500	1000	1005	1.44	0.023	1.46
	500	1050	1005	1.44	0.025	1.46
	500	1300	1005	1.44	0.036	1.48
	550	1050	1105	1.58	0.025	1.60
	550	1100	1105	1.58	0.027	1.61
	550	1350	1105	1.58	0.040	1.62
	600	1100	1206	1.72	0.027	1.75
	600	1150	1206	1.72	0.030	1.75
	600	1400	1206	1.72	0.043	1.76
	650	1150	1306	1.86	0.029	1.89
	650	1200	1306	1.86	0.032	1.89
	650	1450	1306	1.86	0.047	1.91
	700	1200	1407	2.00	0.031	2.03
	700	1250	1407	2.00	0.034	2.03
	700	1500	1407	2.00	0.050	2.05
	750	1250	1507	2.14	0.033	2.17
	750	1300	1507	2.14	0.037	2.18
	750	1550	1507	2.14	0.054	2.19
	800	1300	1608	2.26	0.035	2.30
	800	1350	1608	2.26	0.039	2.30
	800	1600	1608	2.26	0.057	2.32
	850	1350	1708	2.40	0.038	2.44
	850	1450	1708	2.40	0.045	2.45
	850	1650	1708	2.40	0.060	2.46
	900	1400	1809	2.54	0.040	2.58
900	1500	1809	2.54	0.048	2.59	
900	1700	1809	2.54	0.064	2.60	
950	1450	1909	2.68	0.042	2.72	
950	1500	1909	2.68	0.046	2.73	
950	1750	1909	2.68	0.067	2.75	
1000	1500	2010	2.80	0.044	2.84	
1000	1550	2010	2.80	0.048	2.85	
1000	1800	2010	2.80	0.070	2.87	
1050	1550	2110	2.92	0.073	2.99	
38	400	900	955	0.82	0.013	0.83
	400	950	955	0.82	0.014	0.83
	400	1200	955	0.82	0.021	0.84
	450	950	1074	0.92	0.014	0.93
	450	1000	1074	0.92	0.016	0.94
	450	1250	1074	0.92	0.023	0.94

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
“U” TYPE ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Hot zone resistance	Terminal zone resistance	Overall resistance			
in mm	in mm	in mm	Sq. cm	in ohms	in ohms	in ohms			
38	Bridge Thickness 52mm	Minimum Distance between leg Centres 75mm	Maximum Distance between leg centres 80mm	500	1000	1193	1.00	1.000	1.02
				500	1050	1193	1.00	1.000	1.02
				500	1300	1193	1.00	1.000	1.03
				550	1050	1313	1.12	1.120	1.14
				550	1100	1313	1.12	1.120	1.14
				550	1350	1313	1.12	1.120	1.15
				600	1100	1432	1.20	1.200	1.22
				600	1150	1432	1.20	1.200	1.22
				600	1400	1432	1.20	1.200	1.23
				650	1150	1551	1.28	1.280	1.30
				650	1200	1551	1.28	1.280	1.30
				650	1450	1551	1.28	1.280	1.31
				700	1200	1670	1.38	1.380	1.39
				700	1250	1670	1.38	1.380	1.40
				700	1500	1670	1.38	1.380	1.41
				750	1250	1790	1.48	1.480	1.50
				750	1300	1790	1.48	1.480	1.51
				750	1550	1790	1.48	1.480	1.52
				800	1300	1909	1.54	1.540	1.58
				800	1350	1909	1.54	1.540	1.58
				850	1350	2028	1.64	1.640	1.67
				850	1450	2028	1.64	1.640	1.68
				900	1400	2148	1.72	1.720	1.76
				900	1500	2148	1.72	1.720	1.76
				950	1450	2267	1.82	1.820	1.86
				950	1500	2267	1.82	1.820	1.87
				1000	1500	2386	1.90	1.900	1.95
1050	1550	2506	2.00	2.000	2.05				

NOTE:-Longer cold zones or hot zone can be supplied. Resistance can be interpolated for different sizes.  
Resistance Tolerance 20%.

## RANGE OF SIZES AND ELECTRICAL PROPERTIES FOR SPIRAL DOUBLE END ELEMENTS.



Diameter	Effective Heating length	Overall Length	Area	Overall resistance		
in mm	in mm	in mm	Sq. cm	in ohms		
10	100	300	31	1.70		
	100	400	31	1.70		
	100	450	31	1.70		
	150	350	47	2.55		
	150	450	47	2.55		
	150	500	47	2.55		
	200	375	63	3.40		
	200	475	63	3.40		
	200	550	63	3.40		
	250	450	79	4.25		
	250	600	79	4.25		
	250	700	79	4.25		
12	100	300	38	1.40		2.20
	100	400	38	1.40		2.20
	100	450	38	1.40		2.20
	150	350	57	2.10		3.30
	150	450	57	2.10		3.30
	150	500	57	2.10		3.30
	200	375	75	2.80		4.40
	200	475	75	2.80		4.40
	200	550	75	2.80		4.40
	250	450	94	3.50		5.50
	250	600	94	3.50	OR	5.50
	250	700	94	3.50		5.50
14	100	350	44	1.30		1.70
	100	400	44	1.30		1.70
	100	450	44	1.30		1.70
	150	400	66	1.95		2.55
	150	450	66	1.95		2.55
	150	500	66	1.95		2.55
	200	450	88	2.60		3.40
	200	500	88	2.60		3.40
	200	550	88	2.60		3.40
	250	500	110	3.25		4.25
	250	550	110	3.25		4.25
	250	600	110	3.25		4.25
	300	550	132	3.90		5.10
	300	625	132	3.90	OR	5.10
	300	700	132	3.90		5.10
	350	600	154	4.55		5.95
	350	675	154	4.55		5.95
	350	850	154	4.55		5.95

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
SPIRAL DOUBLE END ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Overall resistance	Diameter	Effective Heating length	Overall Length	Area	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in mm	in mm	in mm	Sq. cm	in ohms
18	100	350	57	0.72	25	200	550	157	0.76
	100	400	57	0.72		200	600	157	0.76
	100	450	57	0.72		200	650	157	0.76
	150	450	85	1.08		250	650	196	0.95
	150	500	85	1.08		250	700	196	0.95
	150	550	85	1.08		250	750	196	0.95
	200	550	113	1.44		300	750	236	1.14
	200	600	113	1.44		300	800	236	1.14
	200	650	113	1.44		300	850	236	1.14
	250	650	141	1.80		350	850	275	1.33
	250	700	141	1.80		350	900	275	1.33
	250	750	141	1.80		350	950	275	1.33
	300	750	170	2.16		400	950	314	1.52
	300	800	170	2.16		400	1000	314	1.52
	300	850	170	2.16		400	1050	314	1.52
	350	850	198	2.52		450	1050	353	1.71
	350	900	198	2.52		450	1100	353	1.71
	350	950	198	2.52		450	1150	353	1.71
	400	950	226	2.88		500	1150	393	1.90
	400	1000	226	2.88		500	1200	393	1.90
	400	1050	226	2.88		500	1250	393	1.90
	450	1050	254	3.24		550	1250	432	2.09
	450	1100	254	3.24		550	1300	432	2.09
	125	400	86	0.56		550	1350	432	2.09
125	450	86	0.56	600	1350	471	2.28		
125	500	86	0.56	600	1400	471	2.28		
150	450	104	0.68	200	400	176	0.60		
150	500	104	0.68	200	450	176	0.60		
150	550	104	0.68	200	500	176	0.60		
200	500	138	0.90	250	500	220	0.75		
200	550	138	0.90	250	550	220	0.75		
200	600	138	0.90	250	600	220	0.75		
250	550	173	1.13	300	550	264	0.90		
250	600	173	1.13	300	600	264	0.90		
250	650	173	1.13	300	650	264	0.90		
300	600	207	1.35	350	600	308	1.05		
300	650	207	1.35	350	650	308	1.05		
300	700	207	1.35	350	700	308	1.05		
350	700	242	1.58	400	650	352	1.20		
350	750	242	1.58	400	700	352	1.20		
350	800	242	1.58	400	750	352	1.20		
400	800	276	1.80	450	700	396	1.35		
400	850	276	1.80	450	750	396	1.35		
400	900	276	1.80	450	800	396	1.35		
450	900	311	2.03	500	850	440	1.50		
450	950	311	2.03	500	900	440	1.50		
450	1000	311	2.03	500	950	440	1.50		
500	1050	345	2.25	550	900	484	1.65		
500	1100	345	2.25	550	950	484	1.65		
500	1150	345	2.25	550	1000	484	1.65		
550	1150	380	2.48	600	950	528	1.80		
550	1200	380	2.48	600	1000	528	1.80		
550	1300	380	2.48	600	1050	528	1.80		
150	500	118	0.57						
150	550	118	0.57						
150	600	118	0.57						



**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
SPIRAL DOUBLE END ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Overall resistance	Diameter	Effective Heating length	Overall Length	Area	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in mm	in mm	in mm	Sq. cm	in ohms
28	650	1050	571	1.95	32	800	1500	804	2.16
	650	1100	571	1.95		800	1550	804	2.16
	650	1150	571	1.95		800	1600	804	2.16
	700	1150	615	2.10		850	1600	854	2.30
	700	1200	615	2.10		850	1650	854	2.30
	700	1250	615	2.10		850	1700	854	2.30
	750	1250	659	2.25		300	500	330	0.72
	750	1300	659	2.25		300	550	330	0.72
	750	1350	659	2.25		300	600	330	0.72
	800	1350	703	2.40		350	600	385	0.84
	800	1400	703	2.40		350	650	385	0.84
	800	1450	703	2.40		350	700	385	0.84
	850	1450	747	2.55		400	500	440	0.96
	850	1500	747	2.55		400	550	440	0.96
	850	1600	747	2.55		400	600	440	0.96
32	200	400	201	0.54	450	600	495	1.08	
	200	450	201	0.54	450	650	495	1.08	
	200	500	201	0.54	450	700	495	1.08	
	250	500	251	0.68	500	700	550	1.20	
	250	550	251	0.68	500	750	550	1.20	
	250	600	251	0.68	500	800	550	1.20	
	300	600	301	0.81	550	800	604	1.32	
	300	650	301	0.81	550	850	604	1.32	
	300	700	301	0.81	550	850	604	1.32	
	350	700	352	0.95	600	900	659	1.44	
	350	750	352	0.95	600	950	659	1.44	
	350	800	352	0.95	600	1000	659	1.44	
	400	800	402	1.08	650	1000	714	1.56	
	400	850	402	1.08	650	1050	714	1.56	
	400	850	402	1.08	650	1100	714	1.56	
	450	900	452	1.22	35	700	1100	769	1.68
	450	950	452	1.22		700	1150	769	1.68
	450	1000	452	1.22		700	1200	769	1.68
	500	1000	502	1.35		750	1200	824	1.80
	500	1050	502	1.35		750	1250	824	1.80
	500	1100	502	1.35		750	1300	824	1.80
	550	1100	553	1.49		800	1300	879	1.92
	550	1150	553	1.49		800	1350	879	1.92
	550	1200	553	1.49		800	1400	879	1.92
	600	1200	603	1.62		850	1400	934	2.04
	600	1250	603	1.62		850	1450	934	2.04
	600	1300	603	1.62		850	1500	934	2.04
	650	1300	653	1.76		900	1450	989	2.16
	650	1350	653	1.76		900	1500	989	2.16
	650	1400	653	1.76		900	1550	989	2.16
700	1400	703	1.89	950	1500	1044	2.28		
700	1450	703	1.89	950	1550	1044	2.28		
700	1500	703	1.89	950	1600	1044	2.28		
750	1450	754	2.03	1000	1600	1099	2.40		
750	1500	754	2.03	1000	1650	1099	2.40		
750	1550	754	2.03						

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
SPIRAL DOUBLE END ELEMENTS.**

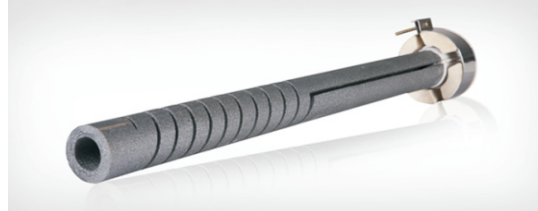
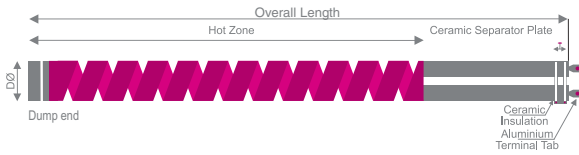
Diameter	Effective Heating length	Overall Length	Area	Overall resistance	Diameter	Effective Heating length	Overall Length	Area	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in mm	in mm	in mm	Sq. cm	in ohms
38	300	600	358	0.54	44	400	600	553	0.76
	300	650	358	0.54		400	650	553	0.76
	300	700	358	0.54		400	700	553	0.76
	350	500	418	0.63		450	700	622	0.86
	350	550	418	0.63		450	750	622	0.86
	350	600	418	0.63		450	800	622	0.86
	400	600	477	0.72		500	800	691	0.95
	400	650	477	0.72		500	850	691	0.95
	400	700	477	0.72		500	850	691	0.95
	450	700	537	0.81		550	900	760	1.05
	450	750	537	0.81		550	950	760	1.05
	450	800	537	0.81		550	1000	760	1.05
	500	800	597	0.90		600	1000	829	1.14
	500	850	597	0.90		600	1050	829	1.14
	500	850	597	0.90		600	1100	829	1.14
	550	900	656	0.99		650	1100	898	1.24
	550	950	656	0.99		650	1150	898	1.24
	550	1000	656	0.99		650	1200	898	1.24
	600	1000	716	1.08		700	1200	967	1.33
	600	1050	716	1.08		700	1250	967	1.33
	600	1100	716	1.08		700	1300	967	1.33
	650	1100	776	1.17		750	1300	1036	1.43
	650	1150	776	1.17		750	1350	1036	1.43
	650	1200	776	1.17		750	1400	1036	1.43
	700	1200	835	1.26		800	1400	1105	1.52
	700	1250	835	1.26		800	1450	1105	1.52
	700	1300	835	1.26		800	1500	1105	1.52
	750	1300	895	1.35		850	1450	1174	1.62
	750	1350	895	1.35		850	1500	1174	1.62
	750	1400	895	1.35		850	1550	1174	1.62
	800	1400	955	1.44		900	1500	1243	1.71
	800	1450	955	1.44		900	1550	1243	1.71
	800	1500	955	1.44		900	1600	1243	1.71
	850	1450	1014	1.53		950	1600	1313	1.81
	850	1500	1014	1.53		950	1650	1313	1.81
	850	1550	1014	1.53		950	1700	1313	1.81
900	1500	1074	1.62	1000	1700	1382	1.90		
900	1550	1074	1.62	1000	1750	1382	1.90		
900	1600	1074	1.62	1000	1800	1382	1.90		
950	1600	1134	1.71	1050	1800	1451	2.00		
950	1650	1134	1.71	1050	1850	1451	2.00		
950	1700	1134	1.71	1050	1900	1451	2.00		
1000	1700	1193	1.80	1100	1900	1520	2.09		
1000	1750	1193	1.80	1100	1950	1520	2.09		
1000	1800	1193	1.80	1100	2000	1520	2.09		
44	300	600	414	0.57	50	300	600	471	0.30
	300	650	414	0.57		300	650	471	0.30
	300	700	414	0.57		300	700	471	0.30
	350	500	484	0.67		350	500	550	0.35
	350	550	484	0.67		350	550	550	0.35
	350	600	484	0.67		350	600	550	0.35

**RANGE OF SIZES AND  
ELECTRICAL PROPERTIES FOR  
SPIRAL DOUBLE END ELEMENTS.**

Diameter	Effective Heating length	Overall Length	Area	Overall resistance	Diameter	Effective Heating length	Overall Length	Area	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in mm	in mm	in mm	Sq. cm	in ohms
50	400	600	628	0.40	50	850	1450	1335	0.85
	400	650	628	0.40		850	1500	1335	0.85
	400	700	628	0.40		850	1550	1335	0.85
	450	700	707	0.45		900	1500	1413	0.90
	450	750	707	0.45		900	1550	1413	0.90
	450	800	707	0.45		900	1600	1413	0.90
	500	800	785	0.50		950	1600	1492	0.95
	500	850	785	0.50		950	1650	1492	0.95
	500	850	785	0.50		950	1700	1492	0.95
	550	900	864	0.55		1000	1700	1570	1.00
	550	950	864	0.55		1000	1750	1570	1.00
	550	1000	864	0.55		1000	1800	1570	1.00
	600	1000	942	0.60		1050	1800	1649	1.05
	600	1050	942	0.60		1050	1850	1649	1.05
	600	1100	942	0.60		1050	1900	1649	1.05
	650	1100	1021	0.65		1100	1900	1727	1.10
	650	1150	1021	0.65		1100	1950	1727	1.10
	650	1200	1021	0.65		1100	2000	1727	1.10
	700	1200	1099	0.70		1150	2050	1806	1.15
	700	1250	1099	0.70		1150	2100	1806	1.15
	700	1300	1099	0.70		1150	2150	1806	1.15
	750	1300	1178	0.75		1200	2150	1884	1.20
	750	1350	1178	0.75		1200	2200	1884	1.20
	750	1400	1178	0.75		1200	2250	1884	1.20
	800	1400	1256	0.80					
	800	1450	1256	0.80					
	800	1500	1256	0.80					

NOTE:-Longer cold zones or hot zone can be supplied. Resistance can be interpolated for different sizes. Resistance Tolerance 20%.

## RANGE OF SIZES AND ELECTRICAL PROPERTIES FOR SPIRAL SINGLE END ELEMENTS.



Diameter	Effective Heating length	Overall Length	Area	Overall resistance	Diameter	Effective Heating length	Overall Length	Area	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in mm	in mm	in mm	Sq. cm	in ohms
14	100	250	44	4.40	28	150	300	132	2.55
	100	300	44	4.40		150	375	132	2.55
	100	375	44	4.40		150	400	132	2.55
	150	300	66	6.60		200	325	176	3.40
	150	375	66	6.60		200	375	176	3.40
	150	400	66	6.60		200	450	176	3.40
	200	325	88	8.80		250	375	220	4.25
	200	375	88	8.80		250	425	220	4.25
	200	425	88	8.80		250	475	220	4.25
	250	375	110	11.00		300	425	264	5.10
	250	425	110	11.00		300	450	264	5.10
	250	475	110	11.00		300	500	264	5.10
18	100	250	57	2.75	350	500	308	5.95	
	100	300	57	2.75	350	550	308	5.95	
	100	350	57	2.75	350	600	308	5.95	
	150	300	85	4.13	400	550	352	6.80	
	150	375	85	4.13	400	600	352	6.80	
	150	400	85	4.13	400	650	352	6.80	
	200	325	113	5.50	450	600	396	7.65	
	200	375	113	5.50	450	650	396	7.65	
	200	450	113	5.50	450	700	396	7.65	
	250	375	141	6.88	500	700	440	8.50	
	250	425	141	6.88	500	750	440	8.50	
	250	475	141	6.88	500	800	440	8.50	
22	300	425	170	8.25	32	200	325	201	3.00
	300	450	170	8.25		200	350	201	3.00
	300	500	170	8.25		200	375	201	3.00
	350	500	198	9.63		250	375	251	3.75
	350	525	198	9.63		250	425	251	3.75
	125	300	86	2.50		250	475	251	3.75
	125	325	86	2.50		300	425	301	4.50
	125	350	86	2.50		300	450	301	4.50
	150	300	104	3.00		300	500	301	4.50
	150	375	104	3.00		350	500	352	5.25
	150	400	104	3.00		350	550	352	5.25
	200	325	138	4.00		350	600	352	5.25
200	375	138	4.00	400	550	402	6.00		
200	450	138	4.00	400	600	402	6.00		
250	375	173	5.00	400	650	402	6.00		
250	425	173	5.00	450	600	452	6.75		
250	475	173	5.00	450	650	452	6.75		
300	425	207	6.00	450	700	452	6.75		
300	450	207	6.00	500	700	502	7.50		
300	500	207	6.00	500	750	502	7.50		
350	500	242	7.00	500	800	502	7.50		
350	550	242	7.00						
350	600	242	7.00						
350	650	242	7.00						

## RANGE OF SIZES AND ELECTRICAL PROPERTIES FOR SPIRAL DOUBLE END ELEMENTS.

Diameter	Effective Heating length	Overall Length	Area	Overall resistance	Diameter	Effective Heating length	Overall Length	Area	Overall resistance
in mm	in mm	in mm	Sq. cm	in ohms	in mm	in mm	in mm	Sq. cm	in ohms
35	200	350	220	2.60	45	250	400	353	2.50
	200	375	220	2.60		250	425	353	2.50
	200	400	220	2.60		250	450	353	2.50
	250	400	275	3.25		300	425	424	3.00
	250	425	275	3.25		300	450	424	3.00
	250	450	275	3.25		300	500	424	3.00
	300	425	330	3.90		350	500	495	3.50
	300	450	330	3.90		350	550	495	3.50
	300	500	330	3.90		350	600	495	3.50
	350	500	385	4.55		400	550	565	4.00
	350	550	385	4.55		400	600	565	4.00
	350	600	385	4.55		400	650	565	4.00
	400	550	440	5.20		450	600	636	4.50
	400	600	440	5.20		450	650	636	4.50
	400	650	440	5.20		450	700	636	4.50
38	450	600	495	5.85	500	700	707	5.00	
	450	650	495	5.85	500	750	707	5.00	
	450	700	495	5.85	500	800	707	5.00	
	500	700	550	6.50	550	800	777	5.50	
	500	750	550	6.50	550	850	777	5.50	
	500	800	550	6.50	550	900	777	5.50	
	550	800	604	7.15	600	850	848	6.00	
	550	850	604	7.15	600	900	848	6.00	
	550	900	604	7.15	600	950	848	6.00	
	200	350	239	2.40	200	350	314	1.80	
	200	375	239	2.40	200	375	314	1.80	
	200	400	239	2.40	200	400	314	1.80	
	250	400	298	3.00	250	400	393	2.25	
	250	425	298	3.00	250	425	393	2.25	
	250	450	298	3.00	250	450	393	2.25	
300	425	358	3.60	300	425	471	2.70		
300	450	358	3.60	300	450	471	2.70		
300	500	358	3.60	300	500	471	2.70		
350	500	418	4.20	350	500	550	3.15		
350	550	418	4.20	350	550	550	3.15		
350	600	418	4.20	350	600	550	3.15		
400	550	477	4.80	400	550	628	3.60		
400	600	477	4.80	400	600	628	3.60		
400	650	477	4.80	400	650	628	3.60		
450	600	537	5.40	450	600	707	4.05		
450	650	537	5.40	450	650	707	4.05		
450	700	537	5.40	450	700	707	4.05		
500	700	597	6.00	500	700	785	4.50		
500	750	597	6.00	500	750	785	4.50		
500	800	597	6.00	500	800	785	4.50		
550	800	656	6.60	550	800	864	4.95		
550	850	656	6.60	550	850	864	4.95		
550	900	656	6.60	550	900	864	4.95		
600	850	716	7.20	600	850	942	5.40		
600	900	716	7.20	600	900	942	5.40		
600	950	716	7.20	600	950	942	5.40		
45	200	350	283	2.00	<p><b>NOTE:-</b> Longer cold zones or hot zone can be supplied. Resistance can be interpolated for different sizes. Resistance Tolerance 20%. Max. Terminal length (T) = 40mm. Max. Dump end length = 30mm</p>				
	200	375	283	2.00					
	200	400	283	2.00					



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