

# Copper

weight (g)	force (N)	force/area (N/m^2)	displacement (angular)	displacement (# divisions)	displacement cm	delta L/L
50	0.49	6095740.446	0	0	0	0
100	0.98	12191480.89	0.75	3	0.01875	0.000103022
150	1.47	18287221.34	1.25	5	0.03125	0.000171703
200	1.96	24382961.78	1.75	7	0.04375	0.000240385
250	2.45	30478702.23	2	8	0.05	0.000274725
300	2.94	36574442.68	2.75	11	0.06875	0.000377747
350	3.43	42670183.12	3.25	13	0.08125	0.000446429
400	3.92	48765923.57	3.75	15	0.09375	0.00051511
450	4.41	54861664.01	4.25	17	0.10625	0.000583791
500	4.9	60957404.46	4.75	19	0.11875	0.000652473
550	5.39	67053144.9	5.5	22	0.1375	0.000755495
600	5.88	73148885.35	5.75	23	0.14375	0.000789835
650	6.37	79244625.8	6.25	25	0.15625	0.000858516
700	6.86	85340366.24	6.75	27	0.16875	0.000927198
750	7.35	91436106.69	7.25	29	0.18125	0.000995879
800	7.84	97531847.13	8	32	0.2	0.001098901
850	8.33	103627587.6	8.75	35	0.21875	0.001201923
900	8.82	109723328	9.5	38	0.2375	0.001304945
950	9.31	115819068.5	9.75	39	0.24375	0.001339286
1000	9.8	121914808.9	10	40	0.25	0.001373626

1050 broke

length 182 cm

cross section

screw gauge div

17	1mm/50div	0.32
17	area(mm sq)	0.080384
17	area m sq	8.0384E-08

zero error 1