

Load (pounds)	Diameter (inches)	Stress (psi)	2014-T6 Aluminum	1045 Steel	Copper	Titanium Ti-6Al- 4V (Grade 5), Annealed
			Modulus of Elasticity (psi)	Modulus of Elasticity (psi)	Modulus of Elasticity (psi)	Modulus of Elasticity (psi)
			10000000	30000000	15000000	12000000
			Strain	Strain	Strain	Strain
120000	2.000000	38,197	0.003820	0.001273	0.002546	0.003183
	1.750000	49,890	0.004989	0.001663	0.003326	0.004158
	1.500000	67,906	0.006791	0.002264	0.004527	0.005659
	1.250000	97,785	0.009778	0.003259	0.006519	0.008149
	1.000000	152,789	0.015279	0.005093	0.010186	0.012732
	0.750000	271,624	0.027162	0.009054	0.018108	0.022635
	0.500000	611,155	0.061115	0.020372	0.040744	0.050930
	0.375000	1,086,498	0.108650	0.036217	0.072433	0.090541
	0.250000	2,444,620	0.244462	0.081487	0.162975	0.203718
	0.187500	4,345,991	0.434599	0.144866	0.289733	0.362166
	0.125000	9,778,480	0.977848	0.325949	0.651899	0.814873
	0.062500	39,113,919	3.911392	1.303797	2.607595	3.259493
	0.031250	156,455,675	15.645568	5.215189	10.430378	13.037973
	0.015625	625,822,701	62.582270	20.860757	41.721513	52.151892

$$\epsilon_a = \frac{(L - L_o)}{L_o}$$

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			Modulus of Elasticity (psi)	Modulus of Elasticity (psi)	Modulus of Elasticity (psi)	Modulus of Elasticity (psi)
			10000000	30000000	15000000	12000000
			Strain	Strain	Strain	Strain
120000	2.00000	38197	0%	0%	0%	0%
	1.75000	49890	0%	0%	0%	0%
	1.50000	67906	1%	0%	0%	1%
	1.25000	97785	1%	0%	1%	1%
	1.00000	152789	2%	1%	1%	1%
	0.75000	271624	3%	1%	2%	2%
	0.50000	611155	6%	2%	4%	5%
	0.37500	1086498	11%	4%	7%	9%
	0.25000	2444620	24%	8%	16%	20%
	0.18750	4345991	43%	14%	29%	36%
	0.12500	9778480	98%	33%	65%	81%
	0.06250	39113919	391%	130%	261%	326%
	0.03125	156455675	1565%	522%	1043%	1304%
	0.015625	625822701	6258%	2086%	4172%	5215%

