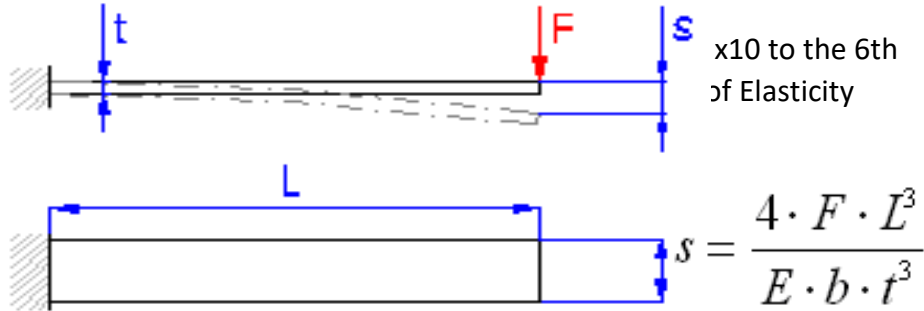




Deflection of NuClamp spring calculated with point load "F" at given distance "L" from support location of spring. Results are for one side of the assembly with the load at 90° to spring.



| | |
|--|----------|
| E (young's modulus of elasticity) for the material (PSI) | 25000000 |
| Width = b (inches) | 1.625 |
| Thickness = t (inches) | 0.250 |

| Material | E | Length = L | b | t | s = .5 | % of L | F when s=.5 | s = 1" | % of L | F when s=1 | s = 2" | % of L | F when s=2 |
|-----------|----------|------------|-------|-------|--------|--------|-------------|--------|--------|------------|--------|--------|------------|
| AISA 9255 | 25000000 | 6 | 1.625 | 0.250 | 0.5 | 8.33% | 367.34 | 1 | 16.67% | 734.68 | 2 | 33.33% | 1469.36 |
| AISA 9255 | 25000000 | 7 | 1.625 | 0.250 | 0.5 | 7.14% | 231.33 | 1 | 14.29% | 462.66 | 2 | 28.57% | 925.31 |
| AISA 9255 | 25000000 | 8 | 1.625 | 0.250 | 0.5 | 6.25% | 154.97 | 1 | 12.50% | 309.94 | 2 | 25.00% | 619.89 |
| AISA 9255 | 25000000 | 9 | 1.625 | 0.250 | 0.5 | 5.56% | 108.84 | 1 | 11.11% | 217.68 | 2 | 22.22% | 435.37 |
| AISA 9255 | 25000000 | 10 | 1.625 | 0.250 | 0.5 | 5.00% | 79.35 | 1 | 10.00% | 158.69 | 2 | 20.00% | 317.38 |
| AISA 9255 | 25000000 | 11 | 1.625 | 0.250 | 0.5 | 4.55% | 59.61 | 1 | 9.09% | 119.23 | 2 | 18.18% | 238.45 |
| AISA 9255 | 25000000 | 12 | 1.625 | 0.250 | 0.5 | 4.17% | 45.92 | 1 | 8.33% | 91.84 | 2 | 16.67% | 183.67 |
| AISA 9255 | 25000000 | 13 | 1.625 | 0.250 | 0.5 | 3.85% | 36.12 | 1 | 7.69% | 72.23 | 2 | 15.38% | 144.46 |
| AISA 9255 | 25000000 | 14 | 1.625 | 0.250 | 0.5 | 3.57% | 28.92 | 1 | 7.14% | 57.83 | 2 | 14.29% | 115.66 |
| AISA 9255 | 25000000 | 15 | 1.625 | 0.250 | 0.5 | 3.33% | 23.51 | 1 | 6.67% | 47.02 | 2 | 13.33% | 94.04 |
| AISA 9255 | 25000000 | 16 | 1.625 | 0.250 | 0.5 | 3.13% | 19.37 | 1 | 6.25% | 38.74 | 2 | 12.50% | 77.49 |
| AISA 9255 | 25000000 | 17 | 1.625 | 0.250 | 0.5 | 2.94% | 16.15 | 1 | 5.88% | 32.30 | 2 | 11.76% | 64.60 |
| AISA 9255 | 25000000 | 18 | 1.625 | 0.250 | 0.5 | 2.78% | 13.61 | 1 | 5.56% | 27.21 | 2 | 11.11% | 54.42 |
| AISA 9255 | 25000000 | 19 | 1.625 | 0.250 | 0.5 | 2.63% | 11.57 | 1 | 5.26% | 23.14 | 2 | 10.53% | 46.27 |
| AISA 9255 | 25000000 | 20 | 1.625 | 0.250 | 0.5 | 2.50% | 9.92 | 1 | 5.00% | 19.84 | 2 | 10.00% | 39.67 |

| | | | | | | | | | | | | | |
|-----------|----------|----|-------|-------|-----|-------|------|---|-------|-------|---|-------|-------|
| AISA 9255 | 25000000 | 21 | 1.625 | 0.250 | 0.5 | 2.38% | 8.57 | 1 | 4.76% | 17.14 | 2 | 9.52% | 34.27 |
| AISA 9255 | 25000000 | 22 | 1.625 | 0.250 | 0.5 | 2.27% | 7.45 | 1 | 4.55% | 14.90 | 2 | 9.09% | 29.81 |
| AISA 9255 | 25000000 | 23 | 1.625 | 0.250 | 0.5 | 2.17% | 6.52 | 1 | 4.35% | 13.04 | 2 | 8.70% | 26.09 |
| AISA 9255 | 25000000 | 24 | 1.625 | 0.250 | 0.5 | 2.08% | 5.74 | 1 | 4.17% | 11.48 | 2 | 8.33% | 22.96 |

Most common material used for leaf springs in cars is AISI 9255 E=25000000

Calculator for leaf springs

http://www.tribology-abc.com/calculators/t14_9.htm