

Linear Springs

Linear Springs are a continuous wave formed (marcelled) wire length produced from spring temper materials. They act as a load bearing device having approximately the same load/deflection characteristics as a wave spring.

Forces act axially or radially depending on the installed position. Axial pressure is obtained by lying the expander flat in a straight line. Circular wrapping the expander (around a piston for example) produces a radial force or outward pressure.

Single Wave
Deflection = $f = \frac{P L^3}{4 E b t^3}$

Single Wave
Operating Stress = $S = \frac{3 P L}{2 b t^2}$

Multiple Wave
Deflection = $f = \frac{P L^3}{16 E b t^3 N^4}$

Multiple Wave
Operating Stress = $S = \frac{3 P L}{4 b t^2 N^2}$

