ISO 9001 2015 CERTIFIED

ISO 14001 2015 CERTIFIED

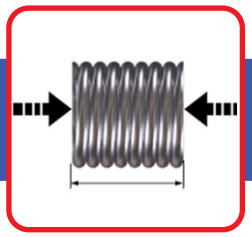
"Quality Control Measures Are Initiated Right From The Raw Material Election Till Dispatch Of The Springs"

We Provide

Good Variety Of Springs With All Common And Customized Ends

Legend Spring INDUSTRIES

Molding is our passion



About Legend Spring

CUSTOM SPRING MANUFACTURING AT ITS BEST

"The organization has grown by leaps and bounds through its dedication as a Tensions Spring, Compression Springs, Torsion Springs, Wire Forms, Spiral Springs, Pressed Components manufacturer with international standards."

Based in Delhi, India. Legend Spring has been manufacturing and delivering exceptional quality stock and custom springs across the globe. Through our reputation and engineering excellence, Legend Spring has become a leading manufacturer of springs in India. Exceeding the expectations of our partner organisations have been our prime focus for high customer satisfaction. We always focus on diligent efforts to provide advantageous deals and maintain long-term mutually beneficiary relationship with all our esteemed partner organisations.

We manufacture many varieties of springs which include the Tension Springs, Compression Springs, Torsion Springs, Wire Forms, Spiral Springs/Brush Springs, & Pressed Components.

We are always open for the customisation as per the need of our partner organisations. Our customers have come to trust and rely on us fororiginal, resourceful, ingenious solutions, constant quality improvement& development yet keeping the best rate in the market.

Our Products

TENSION SPRINGS

Most tension springs are wound with initial tension. This is an internal force that holds the extension spring's coils together. The measure of the initial tension is the load necessary to overcome the internal force and begin coil separation. Unlike a compression spring that has zero load at zero deflection, an extension spring can have a preload at zero deflection (see graph). This built-in load, called initial tension, can be varied within limits, decreasing as the spring index increases.

Note that there is a range of stress (and, therefore, force) for any extension spring index that can be held without problems. If the designer needs an extensio

A compression springs accepts a load and “compresses” as the load is applied. It returns to its free length when the load is removed. Compression springs are most commonly used in a vast variety of machinery from simple mowers to advanced spacecraft. As experienced spring makers, we are equipped to give invaluable assistance in recommending style of end and type of material for the best performance in a given application. Common applications include clutch, engine valve, fuel injector, etc.

COMPRESSION SPRINGS

TORSION SPRINGS

A torsion spring can be closed or open-wound and usually is designed to wind up. As a torsion spring winds up, the coil diameter will decrease and the body length will increase.

Torsion springs are typically used to counterbalance mechanical loads. Proper design considerations must be taken to size the spring(s) to perform the work at hand. Leg configuration options are endless from straight legs to multiple bends. Torsion spring loads are typically expressed in inch pounds, similar to a torque wrench. Most torsion springs have a few degrees of pre-load to stabilize assemblies such as simple levers.

Our Products

WIRE FORMS

The designs of wire forms are entirely up to one's imagination. Wire forms consist of material bent into a configuration that may have some properties of compression, extension or torsion springs. Wire forms typically require non-traditional spring machinery or processes to manufacture. National Spring uses fully automated CNC wire forming equipment to manufacture parts as efficiently as possible.

Recent advances in CNC manufacturing technology have significantly lowered the cost of creating prototypes of complex wire form parts. National Spring engineering staff gladly assists customers with part design, and we often produce wire form prototypes to help make sure components will fit spatial requirements.

SPIRAL SPRINGS

Spiral springs are used as balancing springs for smaller angles of rotation. The energy stored is used as a counter balance or self-aligning torque. The increase in the spring curve is almost linear.

Spiral springs are used in motors, closures, fire dampers, surgical staplers and trimming devices. It can be said that the above-mentioned devices become functional only after they are equipped with spiral springs.

SHEET METAL COMPONENTS

We also manufacture Sheet Metal Press Components to cater the need of our clients in automotive industry, electronics & electrical Industry. We have expertise in designing precision sheet metal press components as per our partner organisation's need. We offer different surface finishes like zinc plating, powder coating, paint, black oxide, etc. as per the requirement of client.

Our Products

CONICAL SPRINGS

Conical springs are basically compression springs coiled in increasing or decreasing outer diameters thus making its shape a cone or tapered one. These springs tend to reduce solid height and provide stability. Conical springs are also known as tapered springs or cone springs. One of the advantages about tapered springs is that they provide stability to those sprigs that have a large slenderness ratio. The slenderness ratio defines whether a spring will bend or buckle during compression/deflection. Its length is too long in proportion with its outer diameter and this, by laws of physics, will cause the spring to deform when it travels down to a desired solid height. conical springs are non-linear springs. Non-linear springs are springs which do not have a constant rate.

GARTER SPRINGS

A garter spring is a coiled steel spring that is connected at each end to create a circular shape, and is used in oil seals, shaft seals, belt-driven motors, and electrical connectors. Compression garter springs exert outward radial forces, while extension garter springs exert inward radial forces. The manufacturing process is not much different from the creation of regular coiled springs, with the addition of joining the ends together. Like most other springs, garter springs are typically manufactured with either carbon steel or stainless steel wire.

DIE SPRINGS

Die Springs Also referred to as 'high compression springs', die springs are designed to maintain and withstand great levels of applied stress. These types of springs are made with rectangular wire instead of circular, unlike their 'compression' counterparts.

This type of high force compression spring can handle 30% more stress than a standard compression spring. Die springs are an extremely reliable and consistent spring. They can be manufactured to different strengths, which is shown through the use of different colour codes. Die springs play an integral role within the manufacturing and engineering industries.

Spring Terminology

- **Active coils (n):** Those coils which are free to deflect under load.
- **Closed ends:** Ends of compression springs where pitch of the end coils is reduced so that the end coils touch.
- **Closed and ground ends:** The closed ends of a spring, ground to provide a flat plane.
- **Close-wound:** Coiled with adjacent coils touching.
- **Coils per inch:** See Pitch.
- **Deflection:** Motion of spring ends under the application or removal of an external load (P).
- **Elastic limit:** Maximum stress to which a material may be subjected without permanent set.
- **Free angle:** Angle between the arms of a torsion spring when the spring is not loaded.
- **Free length (L):** The overall length of a spring in the unloaded position.
- **Heat setting:** Fixturing a spring at elevated temperature to minimize loss of load at operating temperature.
- **Helix:** The spiral form of compression, extension, and torsion springs.
- **Hooks:** Open loops or ends of extension springs.
- **Hydrogen embrittlement:** Hydrogen absorbed in electroplating or pickling of carbon steels, tending to make the spring material brittle and susceptible to cracking and failure; particularly under sustained loads.
- **Initial tension:** The force that tends to keep the coils of an extension spring closed and which must be overcome before the coils start to open.
- **Load (P):** The force applied to a spring, usually in pounds or Newtons.
- **Loops:** Coil-like wire shapes at the ends of extension springs that provide for attachment and force application.
- **Mean coil diameter (D):** Outside spring diameter (O.D.) minus one wire diameter (d).
- **Modulus in shear or torsion (G):** Coefficient of elasticity used for extension and compression springs.
- **Modulus in bending (E):** Coefficient of elasticity used for torsion springs.
- **Moment (M):** See Torque.
- **Open ends, not ground:** End of a compression spring with a constant pitch for each coil.
- **Open ends, ground:** "Open ends, not ground" followed by an end-grinding operation.
- **Passivating:** Acid treatment of stainless steel to remove contaminants and improve corrosion resistance.
- **Permanent set:** A material that is deflected so far that its elastic properties have been exceeded and it does not return to its original condition upon release of load is said to have taken a "permanent set".
- **Pitch (p):** The distance from center to center of the wire in adjacent active coils. Recommended practice is to specify number of active coils rather than pitch.
- **Rate (R):** Change in load-per-unit deflection, generally given in pounds per inch.
- **Remove set:** The process of closing to solid height a compression spring which has been coiled longer than the desired finished length, so as to increase the apparent elastic limit.
- **Residual stress:** Stresses induced by set removal, shot peening, cold working, forming or other means. These stresses may or may not be beneficial, depending on the application.
- **Set:** Permanent distortion which occurs when a spring is stressed beyond the elastic limit of the material.
- **Solid length:** Length of a compression spring when under sufficient load to bring all coils into contact with adjacent coils.
- **Spring index:** Ratio of mean coil diameter (D) to wire diameter (d).
- **Squared and ground ends:** See Closed and ground ends.
- **Squared ends:** See Closed ends.
- **Stress range:** The difference in operating stresses at minimum and maximum loads.
- **Stress relieve:** To subject springs to low-temperature heat treatment so as to relieve residual stresses.
- **Shot peening:** A cold-working process in which the material surface is peened to induce compressive stresses and thereby improve fatigue life.
- **Torque (M):** A twisting motion applied to torsion springs which tends to produce rotation. Equal to the load multiplied by the distance (or moment arm) from the load to the axis of the spring body. Usually expressed in inch-pounds.
- **Total number of coils (N):** Number of active coils (n) plus

Why Us

Our Commitment

Once we commit then we are bound to deliver the best results to the partner organisations. We try our best to stick to the committed schedule of delivery of the products as we understand & respect the importance of planning, time & efforts mutually.

Quality Assurance

Quality consciousness has been of prime importance for us the quality control measures are initiated right from the raw material selection till dispatch of the springs.

Customer Delight

We at Legend Spring deliver our commitment with service mindset to bring the best result from the efforts. We are always ready to support our partner organisation in any manner we can.

Our Experience

Our vast experience in spring manufacturing makes us reliable as we have been delivering the products timely to our customers. Our engineers are always eager to come forward and accept any challenge to meet the demand from client's end in shortest time possible.

Legend Spring INDUSTRIES

Molding is our passion

Contact Us:

91-8586858668

legendspringwork@gmail.com

www.legendspring.com

Reg Office: Sector-74, Noida-210301,Manufacturing Unit: F-36, Main 30 Ft. Road,West Karawal Nagar, Delhi - 110094