M.COIL SPRING

M.Coil Spring Mfg. Co.

Specialist in: Wire Forms & Strips

Mfr of: All types of Springs, Zig Zag & Hot Spring

CELEBRATING

34

YEARS

CONGRATULATIONS

Raw Meterial Springs

Raw Meterial Springs

M.coil has many years of experience in designing and producing special purpose springs from round, flat or square material. We can produce custom or production orders of any type of spring including:

MATERIAL TYPE	MATERIAL SPEC
302 Stainless Wire	ASTM A313 T302
304 Stainless Wire	ASTM A313 T304
316 Stainless Wire	ASTM A313 T316
Oil Tempered Wire	ASTM A229 (Class I & II)
Music Wire	ASTM A228
Monel K-500	QQ-N-286
Brass Wire	ASTM B135
Phosphorus Bronze	ASTM B159 (H08 Temper)
EN 47	EN 47
EN 45	EN 45
Inconel 718 Bar	AMS 5662
Inconel X-750 Bar	ASTM B637 (Chem. Only) UNS N07750 Type 2
304 or 316 Stainless Bar	ASTM A276 Condition "B"
301, 302, 304 & 316 Stainless Strip	ASTM A666

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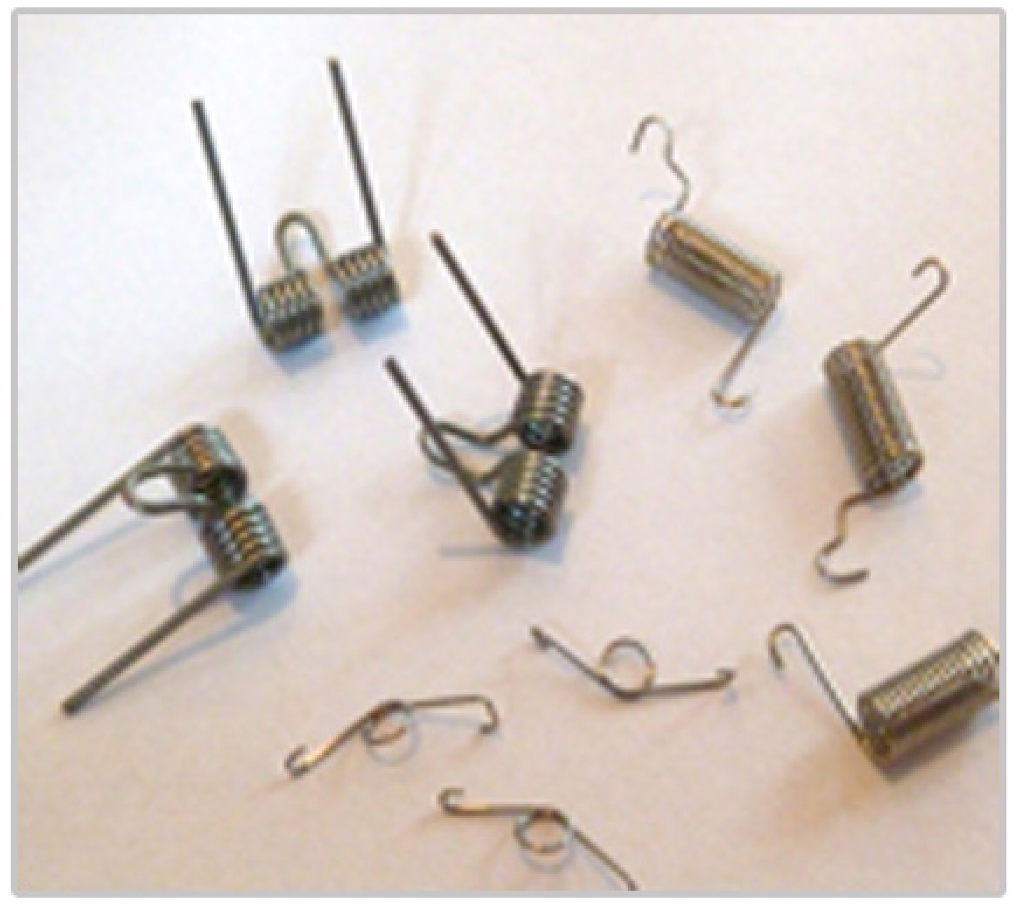
Raw Meterial Springs



Compression Springs

Compression Springs

A compression spring is an open-coil helical spring that offers resistance to a compressive force applied axially. Compression springs are usually coiled as a constant-diameter cylinder. Other common forms of compression springs-such as conical, concave (barrel), convex (hourglass), or various combinations of these-are used as required by the application.

D (wire diameter):	This parameter describes the diameter of wire used as material for spring.
De (External Diameter):	External diameter at large end of the spring. Tolerance for this parameter is (+-)2%(indicative).
Ds (Internal Diameter):	Internal diameter at small end of the spring. Tolerance for this parameter is (+-)2%(indicative)
Ln (Block):	Maximal length of a spring after total blocking. For most conical springs this value equals double wire diameter. Tolerance for this parameter is (+-)2%(indicative).
L0 (free length):	Free length of compression springs is measured in its uncompressed state after previous one time blocking. Tolerance for this parameter is (+-)2%(indicative).
R (spring rate):	This parameter determines spring's resistance, while it is working. It is measured in 1 DaN/mm = 10 N/mm. Tolerance for this parameter is (+-)15%(indicative).
P	Pitch means centre distance between two coils
F	is the deflection.
L1 & F1 (length at force F):	Force F1 at length L1 can be calculated from equation : F1 = (L0-L1) * R. Equation derrived from previous for calculating L1 : L1 = L0 - F1/R.

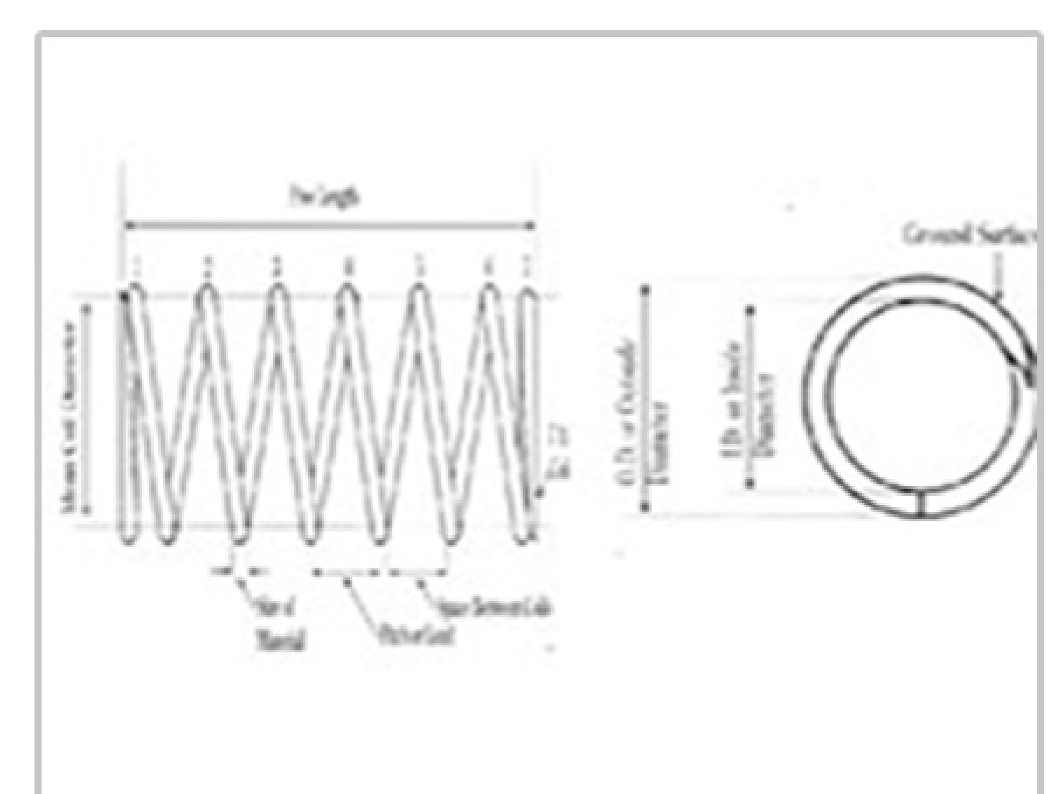
Mini Compression Spring

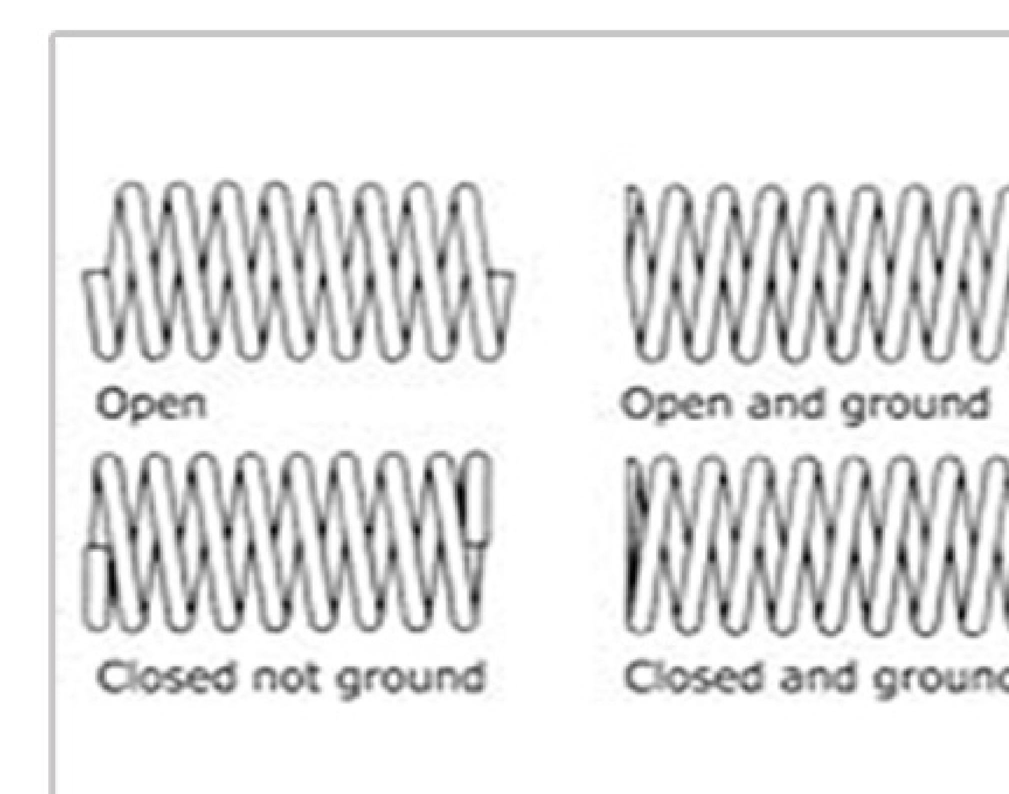
Heavy Duty Compression Spring

Extra Long Spring

Rectangular Spring

Compression Springs





Tension & Extension Springs

Tension & Extension Springs

Extension springs are springs which absorb and store energy by offering resistance to a pulling force. Various types of ends are used to attach the extension spring to the source of the force. Extension springs are usually straight, tapered, and conical.

D (wire diameter):	This parameter describes the diameter of wire used as material for spring.
De (External Diameter):	External diameter at large end of the spring. Tolerance for this parameter is (+-)2%(indicative).
Ds (Internal Diameter):	Internal diameter at small end of the spring. Tolerance for this parameter is (+-)2%(indicative)
B.L (Body length):	Body length of Extension springs is measured in its uncompressed state Tolerance for this parameter is (+-)2%(indicative).
F.L (Free length) :	Free length means distance between two hooks .(Inside Hooks)
R (spring rate):	This parameter determines spring's resistance, while it is working. It is measured in 1 DaN/mm = 10 N/mm. Tolerance for this parameter is (+-)15%(indicative).

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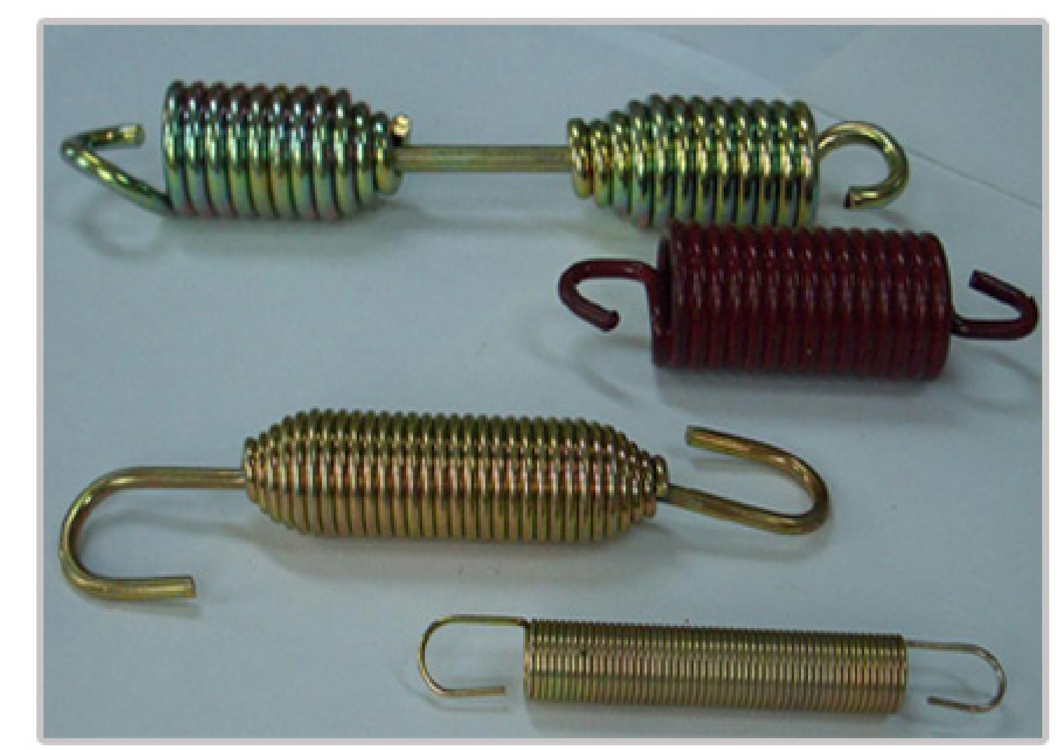
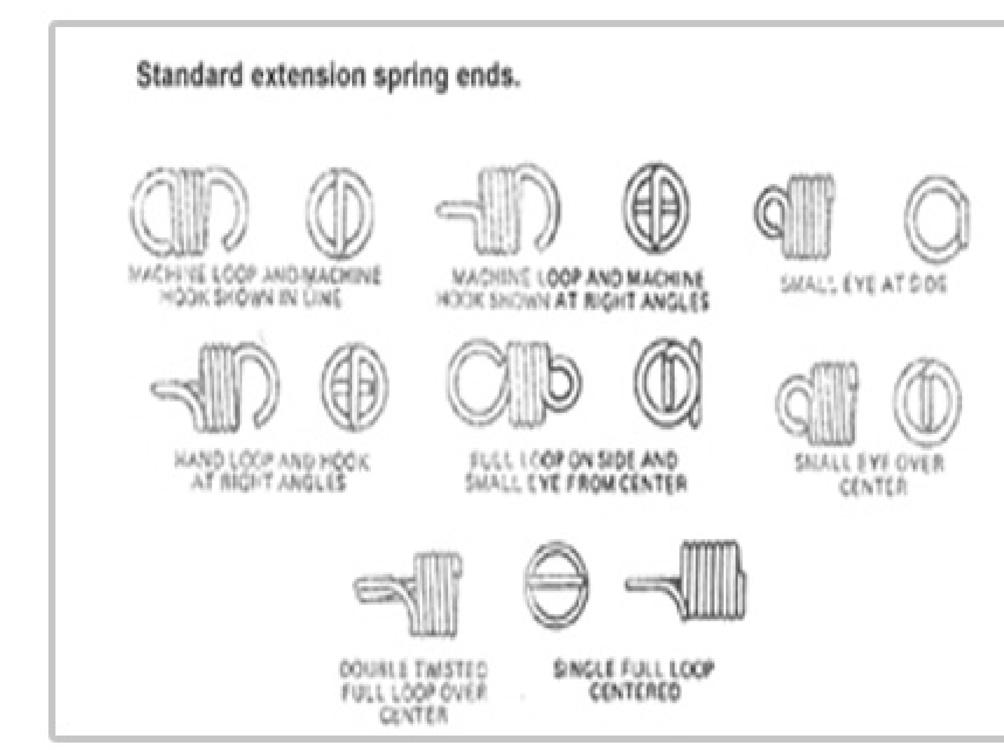
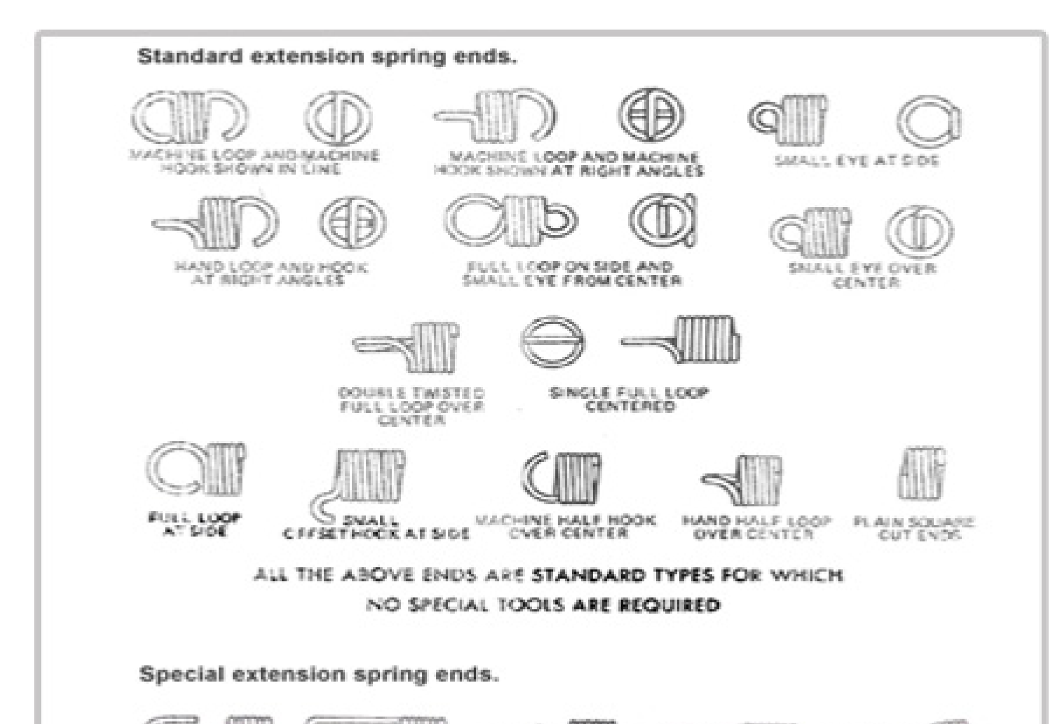
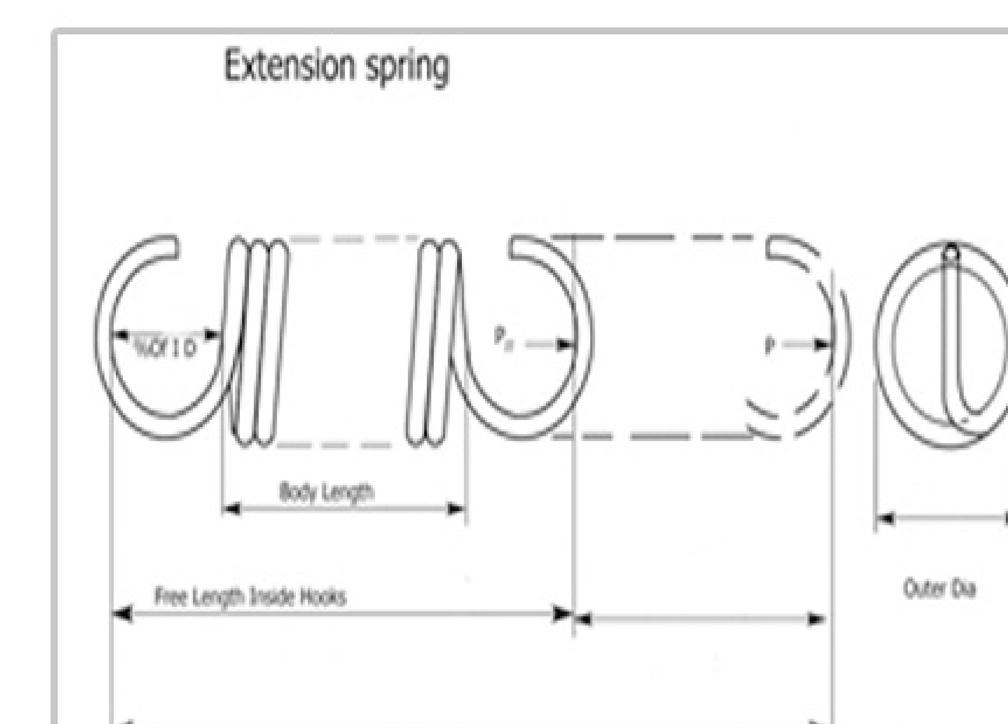
34 YEARS

Tension & Extension Springs









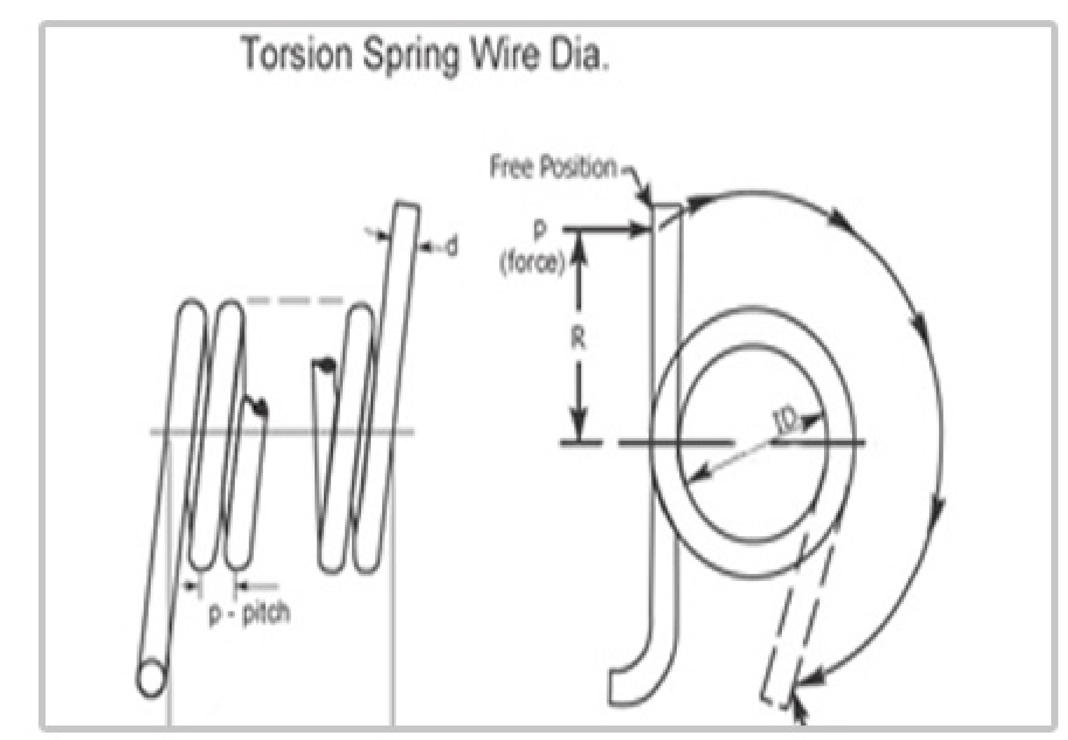
Torsion Springs

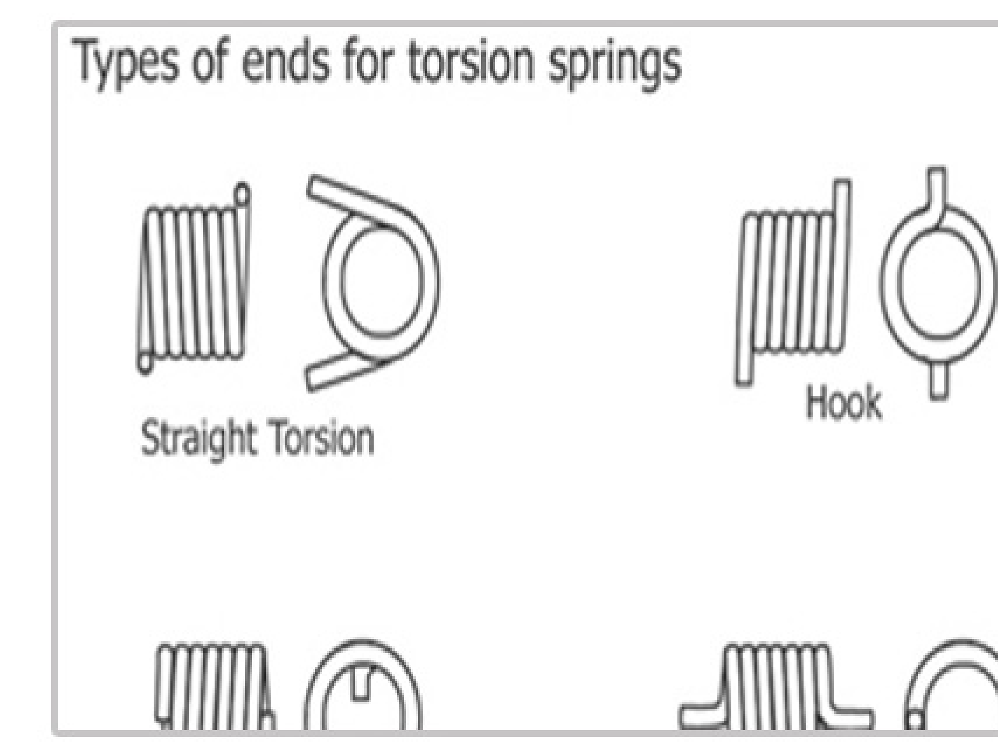
Torsion Springs

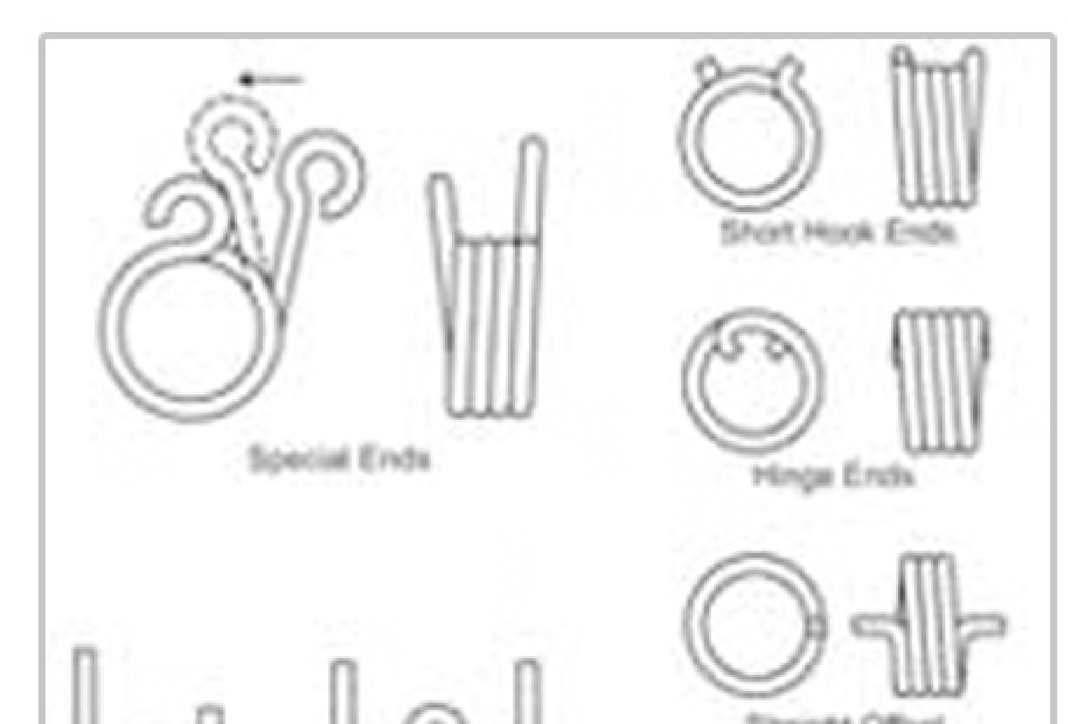
Torsion springs, whose ends are rotated in angular deflection, offer resistance to externally applied torque. The wire itself is subjected to bending stresses rather than torsional stresses, as might be expected from the name

D (wire diameter):	This parameter describes the diameter of wire used as material for spring.
De (External Diameter):	External diameter at large end of the spring. Tolerance for this parameter is (+-)2%(indicative).
Ds (Internal Diameter):	Internal diameter at small end of the spring. Tolerance for this parameter is (+-)2%(indicative)
B.L (Body length):	Body length of Springs
A.L (Arm length) :	Arm length means extended length of arm.

Torsion Springs







Wireforming Stamping

Wireforming Stamping

Wire forms and metal stamping are an economical alternative to more costly machined parts, formings and castings, primarily because complex machining operations are not necessary. The industrial applications for wire forms are virtually limitless.

- Complex or unusual shapes.
- Reduced weight.
- A cost effective alternative.

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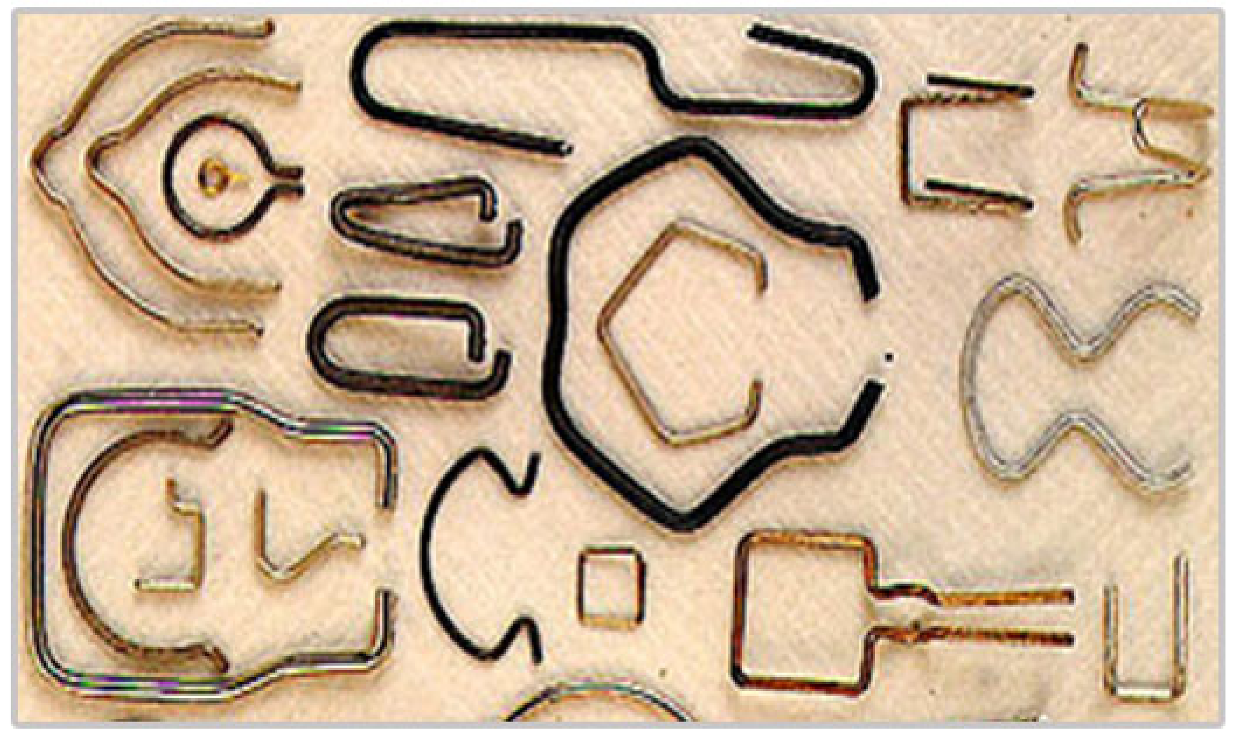
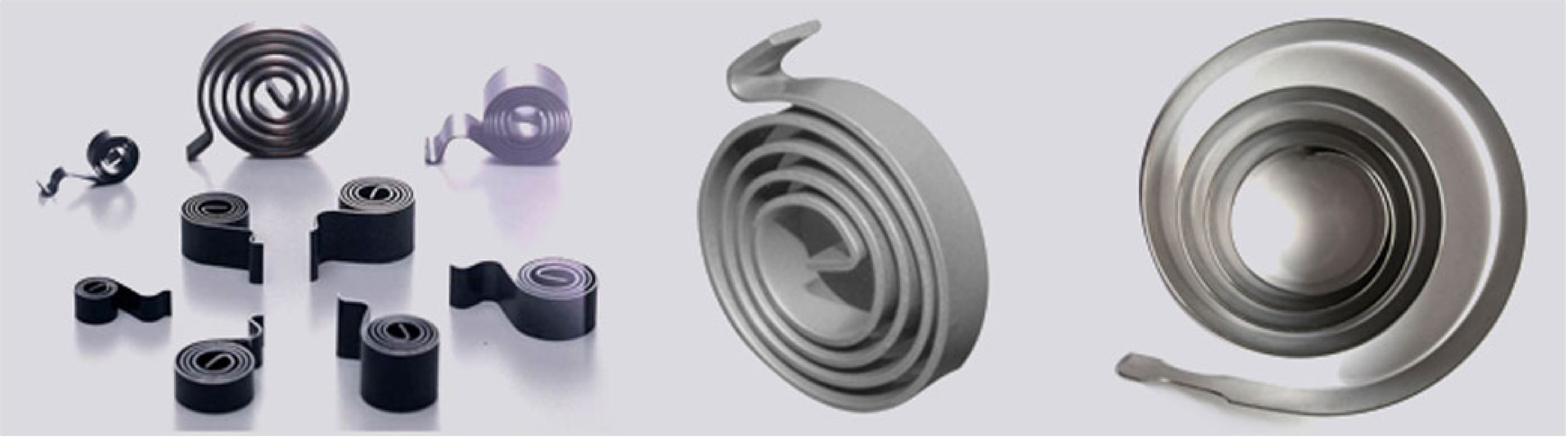
Wireforming Stamping



Spiral Springs



Spiral Springs

Our precision-engineered spiral springs are available in various sizes as per the requirement of the application areas. The spiral springs that we offer are widely used in drilling machines , mesuring tapes and weighing machine.This type of spring generally reverse and forword working application. These are manufactured using optimum quality raw material to meet the demanding machine requirement

T (Thickness):	This parameter describes the Thickness of Sheet Or Strips.
W (Width):	This parameter describes the Width of Sheet or Strips.
De (External Diameter):	External diameter at large end of the spring. Tolerance for this parameter is (+)2% (indicative).
Ds (Smaller Internal Diameter):	Internal diameter at small end of the spring. Tolerance for this parameter is (+-)2% (indicative)
L0 (free length):	Free length of compression springs is measured in its uncompressed state after previous one time blocking. Tolerance for this parameter is (+-)2%(indicative).

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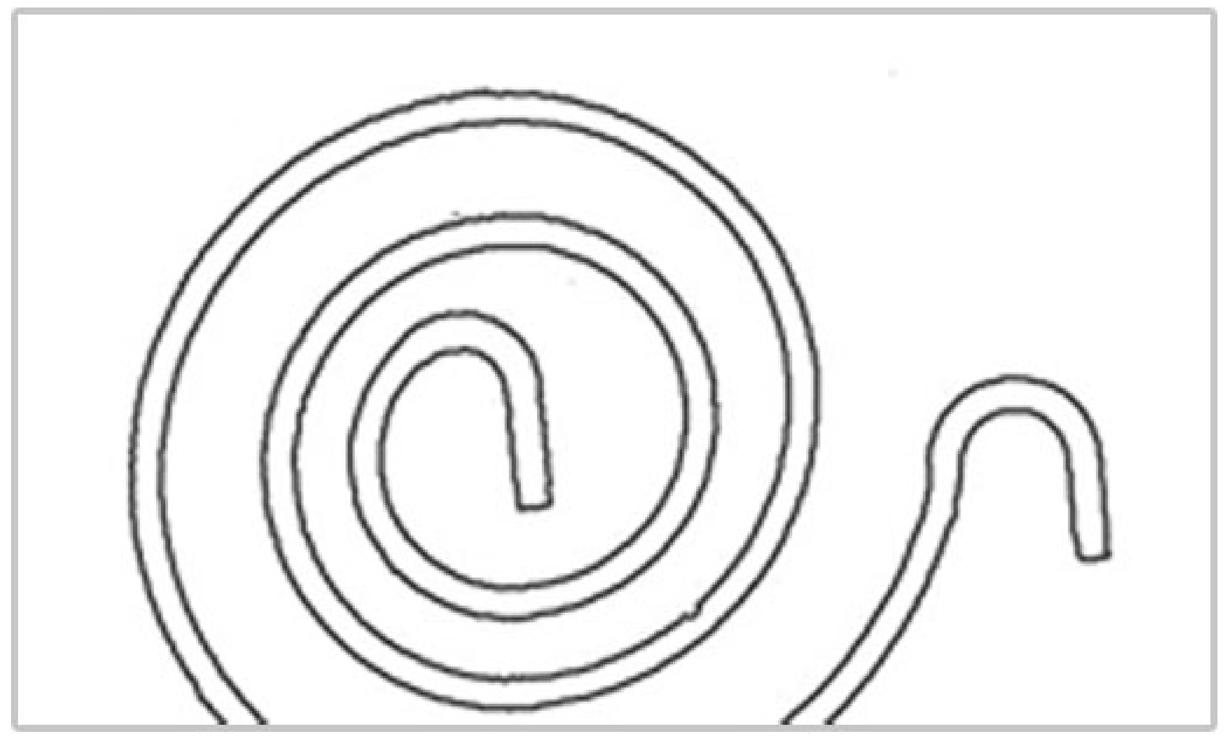
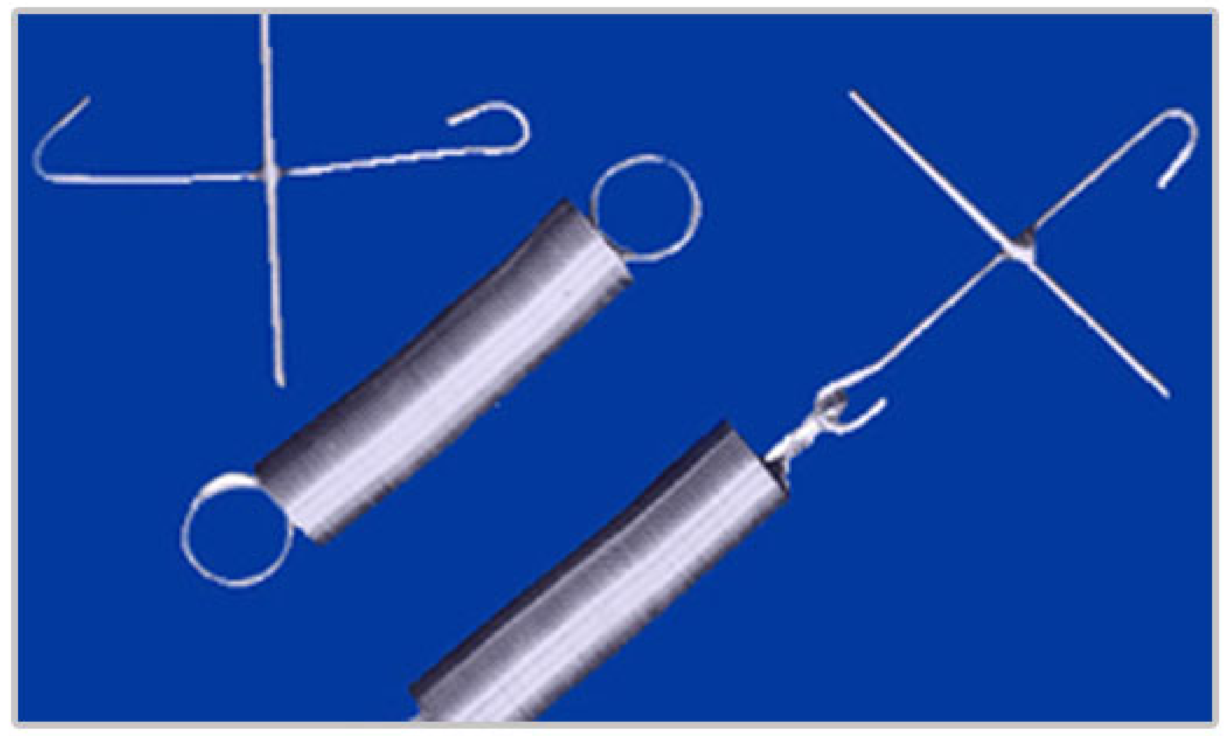
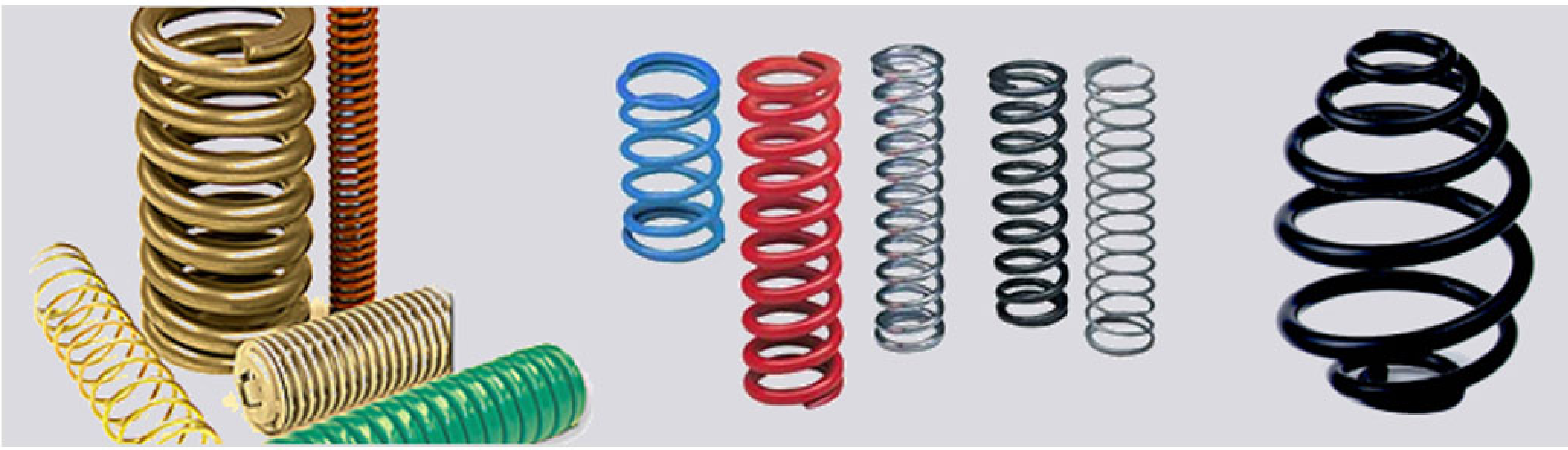
Spiral Springs





Helical Springs



Helical Springs

Helical spring, is a mechanical device, which is typically used to store energy and subsequently release it, to absorb shock, or to maintain a force between contacting surfaces. They are made of an elastic material formed into the shape of a helix which returns to its natural length when unloaded

D (wire diameter):	This parameter describes the diameter of wire used as material for spring.
De (Larger External Diameter):	External diameter at large end of the spring. Tolerance for this parameter is (+-)2% (indicative).
Ds (Smaller Internal Diameter):	Internal diameter at small end of the spring. Tolerance for this parameter is (+-)2% (indicative)
L0 (free length):	Free length of compression springs is measured in its uncompressed state after previous one time blocking. Tolerance for this parameter is (+-)2%(indicative).
R (spring rate):	This parameter determines spring's resistance, while it is working. It is measured in 1 DaN/mm = 10 N/mm. Tolerance for this parameter is (+-)15%(indicative).
P	Pitch means centre distance between two coils..
L1 & F1 (length at force F):	Force F1 at length L1 can be calculated from equation : F1 = (L0-L1) * R. Equation derrived from previous for calculating L1 : L1 = L0 - F1/R.

Helical Springs

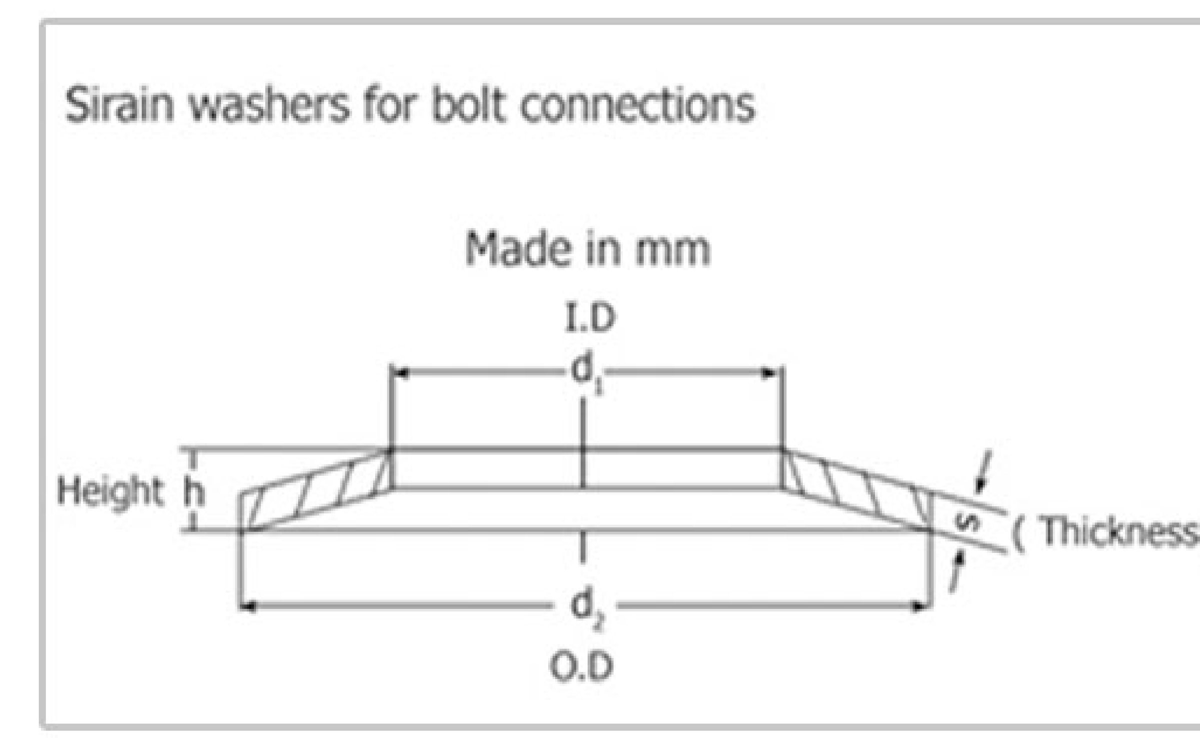
Disc Springs

Disc Springs

We supply a comprehensive range of disc springs, which find its uses in assortment of industries. These are manufactured using qualitative raw material which enables it to exhibit properties such as corrosion resistance, high tensile strength and temperature resistance. We offer these springs as per the requirement of our clients.

T (Thickness):	This parameter describes the Thickness of Sheet Or Strips.
W (Width):	This parameter describes the Width of Sheet or Strips.
De (External Diameter):	External diameter at large end of the spring. Tolerance for this parameter is (+-)2% (indicative).
Ds (Smaller Internal Diameter):	Internal diameter at small end of the spring. Tolerance for this parameter is (+-)2% (indicative)
H (free Height):	Free Height of disc spring.

Disc Springs



Constant Force

Constant Force

We offer high performance constant force spring that are manufactured using qualitative steel. The constant force spring exerts a nearly constant restraining force to resist uncoiling. It functions just like a gliding movement in a continuous way. With constant-force springs considerable flexibility is possible as the load capacity can be multiplied by using two or more strips in tandem. We tailor made the constant force springs as per the requirement of our clients.

A tightly coiled wound band of pre-hardened spring steel or stainless steel strip. When extended a constant force is exerted and this is maintained as the spring is allowed to close. The full force is effective until the spring is in the fully closed position.

T (Thickness):	This parameter describes the Thickness of Sheet Or Strips.
W (Width):	This parameter describes the Width of Sheet or Strips.
De (External Diameter):	External diameter at large end of the spring. Tolerance for this parameter is (+-)2% (indicative).
Ds (Smaller Internal Diameter):	Internal diameter at small end of the spring. Tolerance for this parameter is (+-)2% (indicative)
LO (free length):	Free length of compression springs is measured in its uncompressed state after previous one time blocking. Tolerance for this parameter is (+-)2%(indicative).

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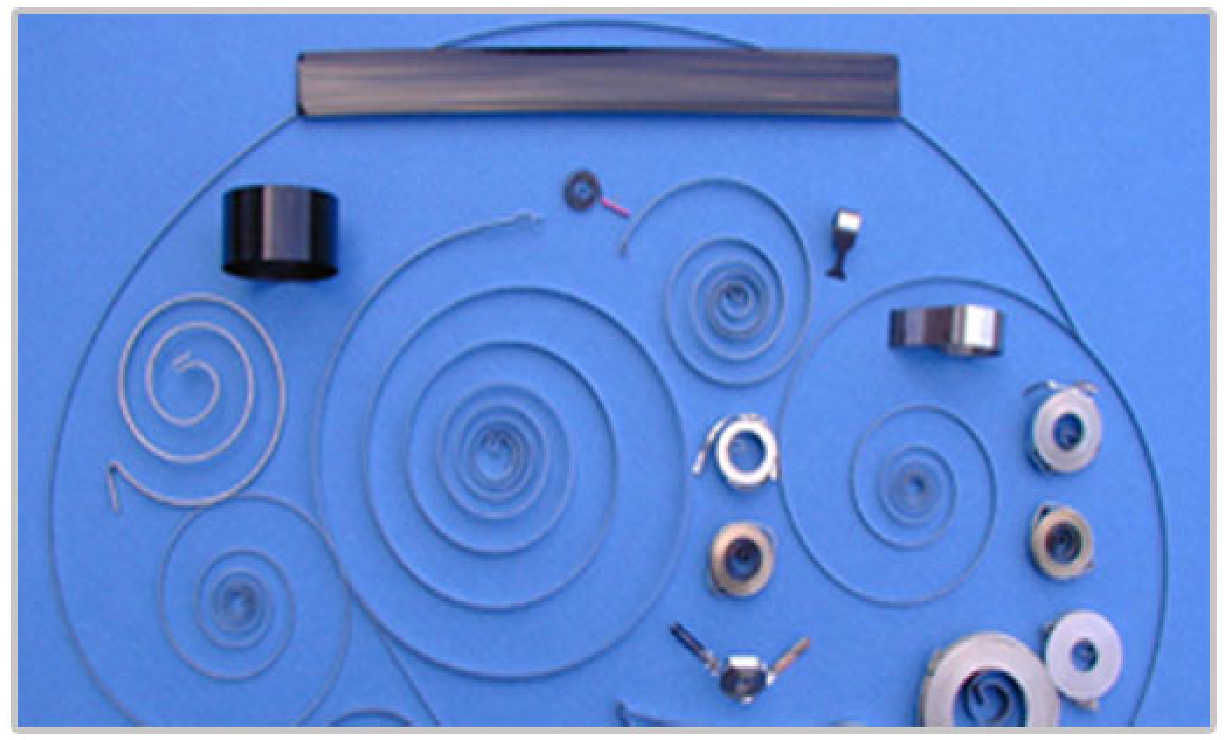
Constant Force



Snap Ring

Snap Ring

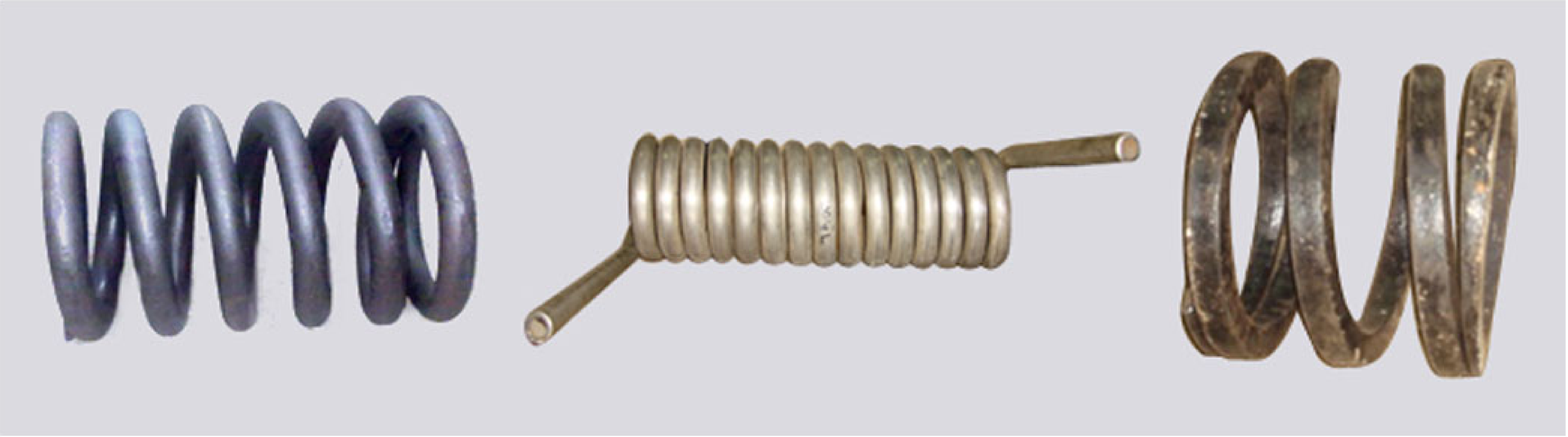
A circlip (a combination of 'circle' and 'clip', and pronounced thus), or snap ring is a type of fastener consisting of a semi-flexible metal ring with open ends which can be snapped into place, into a machined groove on a dowel pin or other part to permit rotation but to prevent lateral movement. There are two basic types: internal and external, referring to whether they are fitted into a tube or over a shaft. Circlips are often used to secure pinned connections.

Circlips which are fitted may be removed with a pair of needle-nosed pliers or a special snap ring tool if the circlip is designed to include entry points for the pliers or tool. Alternatively, cautious leverage with a flat-headed screwdriver may be necessary in lieu of the correct tools or design of snap-ring

T (Thickness):	This parameter describes the Thickness of Sheet Or Strips.
W (Width):	This parameter describes the Width of Sheet or Strips.
De (External Diameter):	External diameter at large end of the spring. Tolerance for this parameter is (+-)2% (indicative).
Ds (Smaller Internal Diameter):	Internal diameter at small end of the spring. Tolerance for this parameter is (+-)2% (indicative)
H (Height):	Height of Snap Ring.

Snap Ring

Heavy Duties Springs



Heavy Duties Springs

Heavy Duties Springs

Tapered Springs

Tapered Springs

M.coil has many years of experience in designing and producing special purpose springs from round, flat or square material. We can produce custom or production orders of any type of spring including:

Tapered Springs

Volute Springs

Volute Springs

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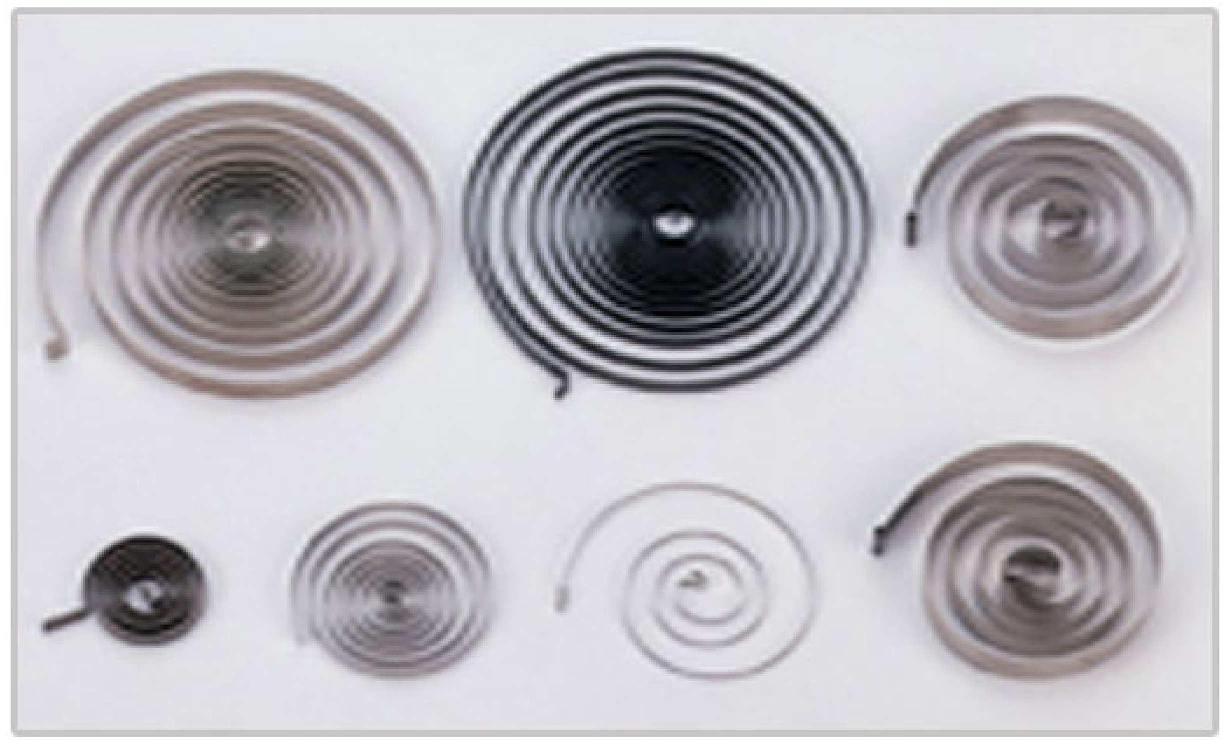
Volute Springs



Clock Springs

Clock Springs

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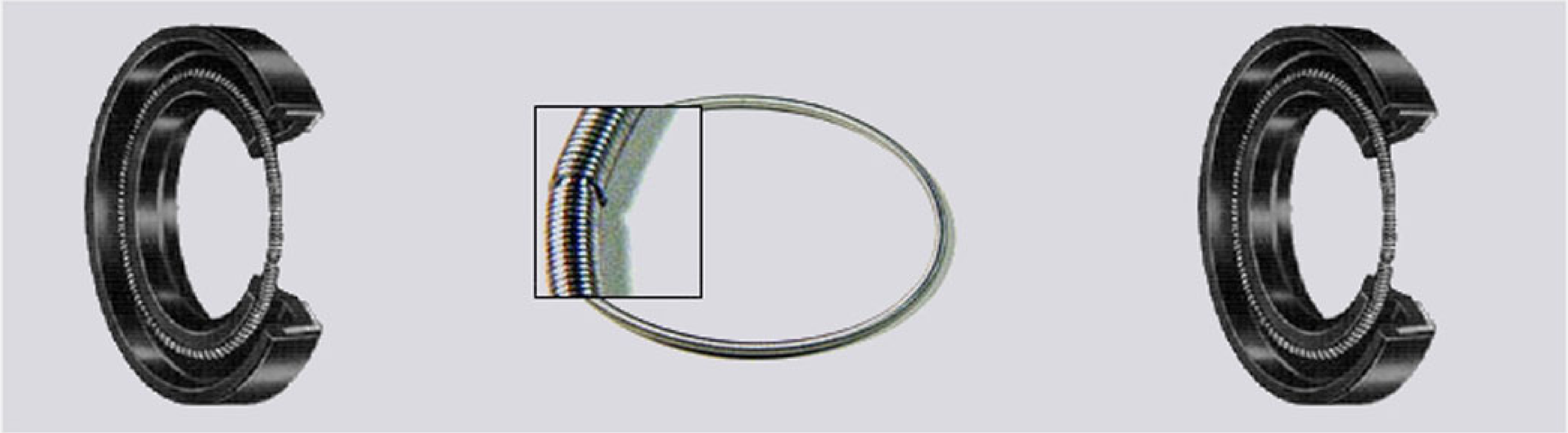
Clock Springs

Garter Springs



Garter Springs

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CELEBRATING 34 YEARS CONGRATULATIONS

Garter Springs

Spring Clips

Spring Clips

When designing your spring clips or other types of flat forms, our designers can work from your drawings, specifications, or part samples. We have the expertise needed to create customized solutions that will leave you with quality parts, to meet your expectations.

One important factor we will consider when designing your spring clips or parts is: To maximize the cycle/life of the part it is important to keep the number of radii to a minimum and each radius as broad as possible. This is necessary because bends are typically where the highest stress concentrations occur. These are therefore the most likely location for a break. The minimum bend radius varies from material to material but normally a radius that is no less than 4 times the material thickness is recommended.

To request a quote for your custom spring clip, bracket, or flat metal form manufacturing needs, send M.Coil Spring your specifications using our online contact form or call us today.

Spring Clips

Metal Stampings

Metal Stampings

M.coil has many years of experience in designing and producing special purpose springs from round, flat or square material. We can produce custom or production orders of any type of spring including:

Metal Stampings

Spring Washers

Spring Washers

Spring washers can be used alone or in stacks in order to achieve the desired load and travel. The main advantage of spring washers is that these are able to generate high force in a very short spring length and with minimal movement when compressed. Therefore, spring washers provide an easy way to compensate for differences in stacked tolerances, also known as “end play”. They also provide a low cost and efficient solution for dealing with a variety of design requirements and complications. This includes when:

- Compensating spring force
- Preloading a bearing
- Applying constant tension on fasteners
- Absorbing intermittent shocks from starting and stopping

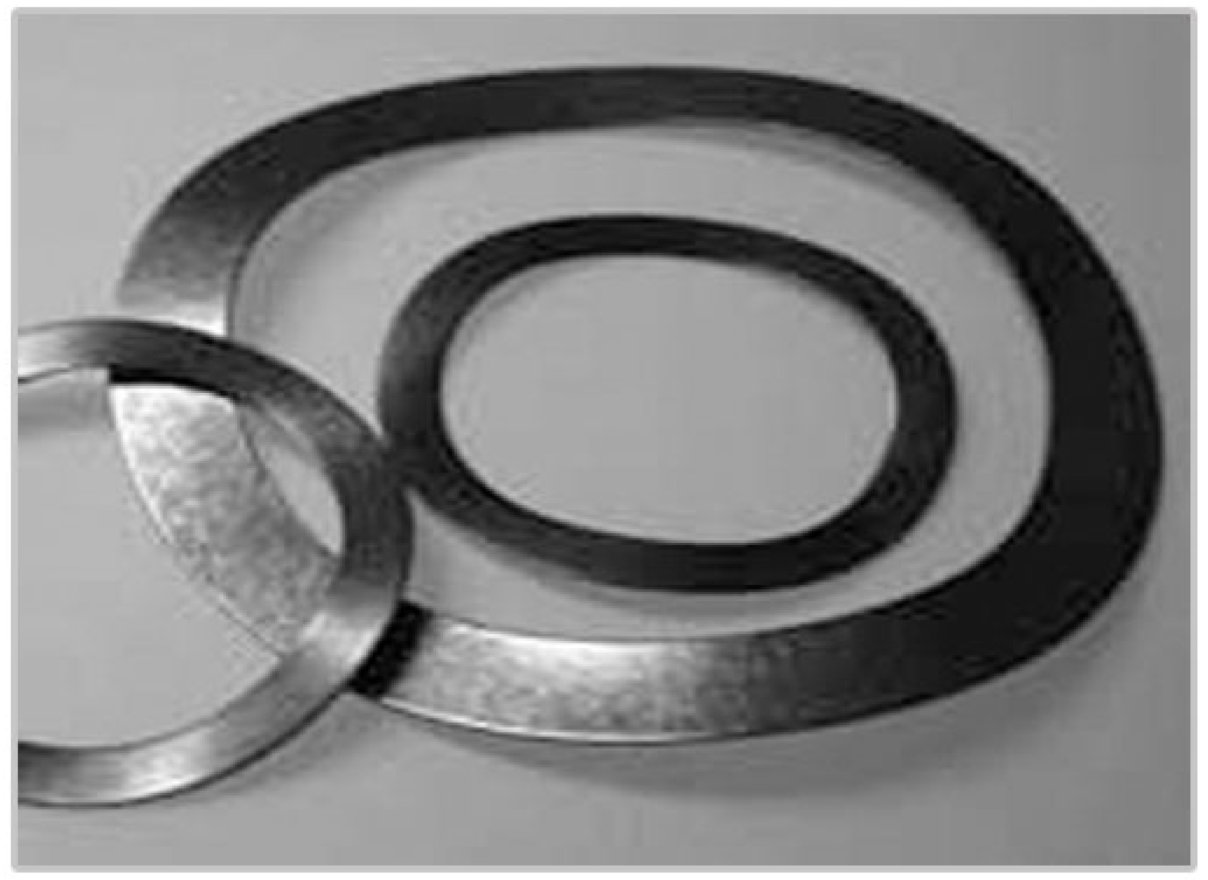
Spring Washers

Wave Spring Washer

Wave Spring Washer

Wave spring washers are normally used in thrust-loading applications for small deflections, particularly where radial space is limited. A typical example is the axial loading of ball bearings. The rate is approximately linear between 20% and 80% of available deflection.

Wave Spring Washer



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