



**MSD** *divisions*  
A division of  
Commercial Communications LLC  
14 Montgomery Street  
Middletown, NY 10940  
845-343-9078

Fax: 845-344-2175 Email: [letterhead@msdspring.com](mailto:letterhead@msdspring.com)

## Terms

**General Policy:** We want to do business with you. We will make every effort to be flexible and accommodate your needs consistent with good business judgment.

**Price and Delivery** are as of the date of quotation in U.S. dollars. In the event of an order, material price shall be subject to adjustment for price in effect at time of shipment. Lead times, material prices and manufacturing costs are generally stable and maintained; but are subject to adjustment at the time an order is actually placed. Freight is FOB Middletown NY. Title passes FOB. We insure over \$100 unless directed otherwise. Blanket orders are subject to adjustment for material price in effect at time of shipment should material costs increase by more than 10% from time of quotation.

**Payment Terms:** .5% 10 net 30 subject to credit approval (fax 3 trade and one bank reference to 845-344-2175 to apply for credit). Visa, Master Card, Discover and Amex are accepted. We do not ship to accounts with prior invoices, over 60 days. We do not ship COD.

**Credit Card Orders:** The total charge is at the bottom right of the packing slip. Invoices are not mailed or emailed unless requested.

**Undisclosed terms, conditions, specification, ordering data and other requirements:** Orders placed with previously undisclosed terms, conditions, specification, ordering data or other requirements are subject to price and delivery adjustment and/or cancellation at our discretion at any time.

**Finish and Identification marking:** Standard finishes as described in our catalog and on our web site are included. Plating, painting, other finishes plus marking and tagging requirements are not included (even though specified) unless specifically stated in the quotation. "Nadcap" passivation rejections and hydrogen embrittlement due to plating are beyond our control and outside the scope of this quotation. They are not reason to withhold payment. Any replacement or rework is quoted separately.

**Warranty, Liability and Design Assistance/Suggestions:** It is your responsibility to assure fit and function, to perform life cycle tests and tolerance analysis, and to design your application to be safe even if a spring should fail. Our warranty is strictly limited to compliance with our specifications on catalog springs and to your print or specification for custom springs (exceptions stated elsewhere in these terms apply). Liability is strictly limited to repair or replacement at our option. We do not under any circumstances accept liability for repairs or consequential damages or legal fees or other damages.

Any assistance or calculations provided reflect only our partial understanding of your application and are only an approximation of how the spring might perform. They are suggestions only and in no way constitute a guarantee that springs made to that design will function as expected. Indeed, a percentage of springs are expected to fail or function differently due to acceptable manufacturing and material variability, material imperfections, analytical errors, or misunderstandings by or among various parties as to the design and its consequences.

Terms such as "Fatigue", "yield", "indefinite", etc. are descriptive only and do not guarantee that any specific spring or springs will have some specific life.

Our liability is strictly limited to repair or replacement at our option. In no event shall our liability exceed the purchase price of the product. This limitation of liability applies even if your terms specify liability or indemnification, consequential damages, legal fees or other damages, and regardless of any other legal premise.

**Other terms and tolerances and specifications:** (shipping, warranty, liability, returns etc.) are as stated in our catalog and on our web site at [www.msdspring.com](http://www.msdspring.com). References on prints, rfq's, orders and other documents to general provisions (such as SQAP's, other specifications, or general PO terms) that were not provided with the quotation are not included in the price. Other terms, policies, and requirements introduced subsequent to the quotation are subject to price and delivery adjustment and may be cause for declining an order. Specification(s), terms, or general provisions incorporated in an order or in purchase order terms or by reference in other specifications may not be complied with unless they were provided with the request for quotation along with any necessary ordering data, plus specifically identified and priced in the quote.

**Changes:** Changes must be in writing. Changes are subject to price and delivery adjustment. Rejections for criteria not specified in the order are changes. Applying or changing specifications or tolerances or dimensions or features not quoted are changes. Requests for certifications, inspections or information not specified in the quotation are changes. We endeavor to inform customers on a best effort basis of scheduled processing that might preclude proposed changes or alter delivery; but do not hold processing without stop work orders. Requirements not disclosed at the time of quotation are considered a change.

**Clarifications to Customer's terms.** If your orders incorporate standard terms or specifications or procedures either directly or by reference, or if you have previously provided standard terms or specifications and expect them to apply, then our clarifications to customer's terms (below) apply.

**Referenced specifications:** Any specification, ordering data or other information that was not provided with the quotation, is not included. Any referenced specification that in our opinion is not relevant is similarly not included. We reserve the right to unilaterally adjust price and delivery if such specification is required at a later date.



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### Clarifications to Customer's standard terms

**"Defects and workmanship"**: We use only new certified material from reputable sources. Still, there are no known processes, tests or specification requirements that preclude all potentially significant defects in the materials used. In addition, specific springs may fail in service due to a variety of circumstances most of which are beyond our control. Most notable of these is shock loading in the application. Our liability is strictly limited as below. We can not guarantee that parts are suitable for your application, nor totally that they are totally free of defects.

**"Design assistance"**: Calculations or suggestions provided by us are on a best effort basis. See Warrantee, liability and design assistance in our terms above. Our liability is strictly limited as identified below and in our terms. Design and testing to assure safety and function and reliability are entirely the buyer's obligation.

**"Suitable for your intended purpose" (or similar clauses)**: Catalog springs are warranted to meet catalog specifications. Custom springs are warranted to meet your specifications. We do not fully understand your application. We do not agree to warrantee suitability for your application, nor for your intended use, nor even for what may to some appear to be "normal" use.

**"Liability and indemnification"**: Our liability is strictly limited to repair or replacement at our option. We do not agree to indemnification nor accept liability for things such as invalid claims, consequential damages, legal fees or any other damages regardless of any legal premise for such claim.

**"Time is of the essence" (or similar clauses)**: Quoted lead times will apply from the date all issues are resolved, not from the purchase order date. Any manufacturing holds, changes or stop work orders must be in writing. We do not agree to make up for time lost prior to resolution of the order. In the event of P.O. delivery dates that are sooner than what was quoted, we will on a best effort basis, endeavor to accelerate production consistent with quoted costs. If we cannot meet the dates We will propose expediting charges. If matters cannot be resolved

**"Cancellation"**: Cancellations at your discretion/convenience are subject to cancellation charges.

**"Inspections and acceptance"**: Rejections except for hidden defects will not be considered after 60 days. We do not agree to unlimited or indefinite rights to reject.

**"Access to facilities"**: Support will be provided without charge in proportion to the value of the underlying order(s). Subcontractor cooperation will be secured on a best effort basis should the situation arise. We reserve the right to charge for additional support plus consequential and unintended costs. We reserve the right to qualify visiting personnel with regards to safety and administrative practices that they may encounter in the scope of their work. We do not agree to unrestricted access.

**"Best price guarantee" or similar terms**: Our prices are highly dependent on the quantities ordered and annual volumes. Prices depend on the cost of material and labor and do vary over time. Any guarantee applies to equivalent circumstances only. Charges emanating from differences in terms are not equivalent circumstances.

**"Quantity"**: Catalog springs in small quantities (typically < 100) are shipped in exact quantities. All others are subject to a +/- 10% variation.

**"Special processes"**: Standard coil springs manufacturing techniques are not "special". We reserve the right to designate other operations as proprietary.

**"Terms not provided with the request for quotation"**: Our quotation was based on our standard terms and practices. We do not agree to terms imposed with the order that were not previously provided and negotiated. The order is subject to price and delivery adjustment or contract termination and cancellation charges regardless of when any changes, discrepancies, or new terms are discerned and regardless of any intervening actions taken or purchase order provisions to the contrary,

**"Quoted exceptions or terms ignored"**: Quoted exceptions and terms shall survive if omitted from the PO without negotiation. Quoted terms take precedence over non-negotiated provisions that conflict with or preclude them. In the absence of a negotiated resolution, we do not agree to drop the quoted exceptions.

**"Action constitutes acceptance" (or similar clauses)**: We do not agree to these terms, unless specifically negotiated in advance of order placement.

**"Unilateral changes" (or similar statements)**: We do not agree to such terms, unless specifically negotiated in advance of order placement.

**"Absence of agreement"** In the absence of agreement there is no contract, the order is declined. Goods are re-offered in accordance with quoted terms and exceptions. Any action taken by buyer to further the order subsequent to receipt of these clarifications such as technical instructions, shipping instructions, expediting of product, acceptance of goods, use of goods, or payment for goods constitutes acceptance of the re-offered terms and exceptions.



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## Price list for Administrative requirements

(Administrative, Certifications, finishes plus Inspection and Identification charges are in addition to quoted Product costs)

• <b>Maintain raw material trace ability:</b>	<b>No charge</b>
• <b>Certification of Compliance (standard): located at the bottom of every packing slip.</b>	<b>No charge</b>
• <b>ROHS certification located at the bottom of every packing slip.</b>	<b>No charge</b>
• <b>Country of origin certification located at the bottom of every packing slip.</b>	<b>No charge</b>
• <b>Mercury free certification located at the bottom of every packing slip.</b>	<b>No charge</b>
• <b>MSDS: downloads (.pdf format) as available from website.</b>	<b>No charge</b>
• Raw Material Chemical and physical properties report:	\$25.00/item
• DFARS compliance certification:	\$35.00 + costs incurred **
• Raw Material Domestic Manufacture certification:	\$35.00 + costs incurred **
• Separate customized letter of certification.	\$35.00 + costs incurred **
• Separate customized letter of certification requested after delivery	Priced on a case basis **
• Standard FAI (first article inspection) on Loads	\$35.00/item
• Standard FAI (first article inspection) on Dimension	\$25.00/item
Passivation Certification to QQP-35: (add 2 weeks to delivery)	\$100.00 minimum/item
• NADCAP passivation and plating: (delivery varies as required)	\$125.00 + costs incurred **
• Cad, Zinc and Nickel plate certification:	\$50.00/item
• Other plating certifications:	Priced on a case basis **
• Mil Standard 105 Inspection:	Priced on a case basis. **
• Mil-S-13572:	Priced on a case basis **
• Mil Std 130: parts are quoted less this specification	No quote
• MSDS (hard copy – many steels available at web site no charge)	\$50.00
• MSDS (hard copy - plating and others)	Priced on a case basis **
• Administrative Burden for review and implementation of complex specifications	Priced on a case basis **
• Weekly status updates	\$25.00/item/week/request
• Indemnifications and warrantee	\$285.00/hour (\$10,000 minimum charge) **
Engineering charges to review your design for suitability of springs for your application. Requires complete design information on spring, assembly, end product, application, and prior industry wide history of any problems with this and all other similar products.	

\*\* Item must be identified at time of quotation including all relevant ordering data. If not, the quotation is not valid. If identified after order has been entered, cancellation charges may apply. If identified after order has been shipped, payment is due in full without compliance.



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## **DESIGN NOTES**

### **With regard to fatigue and spring failure:**

**Fatigue is the weakening of a spring over time, or the failure of the spring at some number of cycles. Our design practices provide an estimated theoretical fatigue limit. Springs operating below that limit at modest speeds, and at normal temperatures are likely to last indefinitely. Springs above that limit, (or below that limit with rapid/shock loads) will likely have a finite life.**

**Material properties are allowed by specification to have significant variations with regard to fatigue. As such, we cannot offer an absolute guarantee of no fatigue.**

**Still, over the years we have learned a few things:**

1) In applications where fatigue is a concern, **an extra (second) stress relief operation after manufacture can be beneficial.** The cost is modest.

2) **It is beneficial to keep the stress levels as low as possible.** Springs with lower stress levels will be more likely to last longer, and less likely to be effected by material variations, rapid/shock loads, temperature excursions, and extreme cycling. Often, the options available are limited by previously established design parameters.

- **If the maximum stress levels are below the fatigue limit, then the lower they are the less likely springs are to fatigue.**
- **If the maximum stress levels are above the fatigue limit it is still beneficial to keep the stresses as low as possible.** Lower stress levels are likely to last longer.

3) **In some instances higher strength metals can be substituted.** They may accept higher stress levels but, there may be other considerations. For example chrome silicon (and chrome vanadium) oil tempered wires have higher allowable stresses; but are more subject to hydrogen embrittlement if electro-plated.

4) **Shot peening can be beneficial.** The extra cost depends on the specific configuration and specifications applied.

5) **Shock loads** (such as in firearm recoil springs) can be “fatigue poison”.

### **General Notes:**

#### **1. The wire diameter is critical and should be measured carefully with dial calipers!**

Loads are proportional to the wire diameter cubed. A difference of .002 in wire diameter is often significant. This depends on your application, which by the way we don't pretend to fully understand.

#### **2. If your application subjects the springs to rapid or shock loads, then you need to tell us that!**

**3. If your application subjects the springs to temperatures above 375F s, then you need to tell us the maximum temperature!**

#### **4. The material is very significant.**

- 302 Stainless steel is 18% less stiff than carbon steel (a.k.a. Music Wire).
  - These are by far, the two most common material types.
  - There are numerous slightly different variations that are also readily available. 316 SS for example, is also often commonly available and offers better salt spray corrosion resistance.
- We can not tell from a picture if your spring is 302 Stainless Steel or Music wire, much less if another alloy was used.
- We can not tell from a picture if your spring is made of another stainless steel (e.g. 17-7PH, 400 series....etc.) , or some non-ferrous metal (e.g. Brass Bronze, Beryllium copper, Phosphorous Bronze, Nickel alloys ..... etc.).
- The possibilities can often be reduced by measuring the loads, and knowing the details of the application.
- If not precluded, then the specific materials can be determined from a sample by various other tests. The cost and lead time of those extra tests (if any) is not included in any quotation or proposal or offer.
- A simple test that we will do for free is to grind one end of the spring. (any bench grinder will do)
  - Music wire emits a stream of sparks,
  - 300 series Stainless Steel does not generate a stream of sparks.