



# Quality Management System

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## Quality Manual QM-001

### COMPANY PROPRIETARY INFORMATION

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### Revision History

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## 1.0 Scope

Custom Spring (henceforth referred to as “Custom”) provides a broad range of manufactured springs and accompanying product for use in a variety of industrial applications, including but not limited to: oil and gas, petrochemical, refinery, aerospace, construction, and transportation.

This manual describes Custom Spring’s Quality System Policies and Procedures. These policies and procedures control all activities from supplier procurement to customer shipment of components.

Our quality management system uses ISO 9001:2015 and API Q1-9th edition, as a framework that allows our organization to document, evaluate and improve our practices in order to better satisfy the needs and expectations of our customers, and interested parties.

## 2.0 References

ISO 9001-2015 – Quality Management Systems – Requirements  
ISO 9000-2015 – Quality Management Systems – Fundamentals and Vocabulary  
API Q1 9<sup>th</sup> Edition – Specification of Quality Management System Requirements for manufacturing organizations for petroleum and natural gas industry

## 3.0 Definitions

Custom uses the same internationally recognized terms, vocabulary, and definitions given in ISO 9001:2015 and API Q1 – 9th Edition. Acronyms, terms vocabulary that are unique to us are defined throughout the text as well as at the procedural level.

## 4.0 Quality Management System

### 4.1 General Requirements

Custom Spring has established, documented and implemented a Quality Management System (QMS) in accordance with the requirements of ISO 9001:2015 and API Q1 9<sup>th</sup> edition. The system is maintained and driven toward continual improvement of the business, customer satisfaction, and the QMS through emphasis on the quality policy, quality objectives, and evaluation of audit results, analysis of data, corrective and preventive action, risk and opportunity assessment and management review.

To design and implement the QMS, Custom Spring has:

- Identified the processes needed for the QMS and their sequence, interaction and application throughout the organization (Appendix A)

- Determined criteria and methods needed to ensure that the operation and control of the processes are effective, and documented when necessary or required.
- Identified both internal and external issues affecting the quality management system, and the ability to achieve planned or intended results.
- Identified processes requiring validation and the methods and processes necessary to validate them in order to supply the highest quality product and service to the customer.

## 4.2 Documentation Requirements

Custom maintains a four-tiered QMS to assist in efficient navigation through various levels of documents in QMS. The Quality Management System Document Interface provides a master list of all QMS documents within each tier:

### 4.2.1 General

The QMS documentation includes:

- **A documented Quality Policy:**  
The quality policy acts as a compass by providing the direction and framework for establishing key corporate level performance measures, as well as related objectives and targets. The quality policy is communicated to all employees during regular training and postings in relevant locations in the facility and awareness of the quality policy is assessed during internal audits. (Appendix B)
- **Tier-I Quality Manual:**  
This first level of documents outline the overall structure of the QMS and provide reference to all core Tier-II procedures. Controlled QMS manuals shall be issued to a licensing/registration body requiring a review of the manual as part of an industry registration program.
- **Tier-II Documented Procedures:**  
All procedures required by the ISO and API programs will be referenced under Tier-II documents as QMS core procedures.
- **Tier-III Documented Processes:**  
Standard Operating procedures/Work Instructions required to control the operations of Custom are categorized under Tier-III documents.
- **Tier-IV Forms:**

All forms which are used to support and accomplish the functions outlines in the above procedures are categorized under Tier-IV.

- **Quality Records:**

As dictated by various QMS procedures, official records developed during operations must be identified and filed per the documented Control of Records procedure.

#### **4.2.3 Control of Documents**

Custom Spring maintains a documented procedure-Control of Documents- for the identification, distribution, and control of documents required by the QMS and per ISO-9001:2015 and API Q1.

#### **4.2.4 Control of Records**

Quality records are maintained to provide evidence of conformity to requirements and of the effective operation of the QMS. The records are maintained according to the procedure– Control of Records.

### **4.3 Communication**

#### **4.3.1 Internal Communication**

Custom uses established methods of communicating internally the Quality Policy, the importance of meeting or exceeding customer requirements and expectations and what those are, as well as the importance of adhering to legal, statutory, regulatory and industry standards. The results of analysis of the effectiveness of the QMS are also communicated internally. This is done in accordance with the documented Communication Procedure.

#### **4.3.2 External Communication**

Custom Spring manages external communication with customers, suppliers and vendors, and other interested parties in accordance with a documented Communication Procedure. This communication covers, at minimum, execution of contracts, inquiries, order handling and changes there-to, product information, nonconformities identified after delivery by the organization, feedback regarding customer complaints, and when a product quality plan (PQP) is required, communication regarding changes to the PQP, or providing information required

by the plan. Custom also communicates information regarding the effectiveness of the QMS with relevant interested parties, stakeholders and registration or certification bodies.

## **5.0 Management responsibility**

### **5.1 Management Commitment**

Senior management shall ensure the availability of resources essential to establish, implement, maintain and improve the QMS. To continue to provide leadership and show commitment to the improvement of the QMS, management engages in the following:

- Establishment, approval, review and communication of the Quality Policy.
- Establishment, approval and communication of the Quality Objectives.
- Conduct annual management reviews.
- Ensure the availability of resources for proper and effective implementation of the QMS, achievement of planned outcomes, and the on-time supply and delivery of quality product and service.
- Encourage active engagement of all employees in the effective implementation and continual improvement of the QMS.

### **5.2 Customer Focus**

Top Management ensures that all customer requirements are determined and met to enhance customer satisfaction by implementing the following procedures:

- Contract Review procedure
- Management review procedure
- Customer satisfaction procedure

### **5.3 Planning**

#### **5.3.1 Quality Objectives**

Quality objectives are established to support our organization's efforts in achieving the goals set forth by the quality policy and reviewed annually as a part of management review meeting, for suitability. Objectives have been established with careful consideration to the strategic goals of the business, and their ability to evaluate the effectiveness of the QMS in achieving intended outcomes as well as their interaction with all relevant functions and levels of the business. The established quality objectives are as follows:



Objective	Target	Monitoring Frequency*	Reporting Frequency*
Non Conformance Reports (Internal)	10% of total orders	Monthly	Quarterly
Customer Complaints	3% of total orders	Monthly	Quarterly
Cost of Poor Quality	3% of total sales	Monthly	Quarterly

Additional key performance indicators, and data that helps indicate the effectiveness of the QMS, or ability of Custom to meet customer requirements is evaluated as deemed necessary by Management.

\*While the data is evaluated annually during Management Review for suitability as a quality objective, the data is monitored, analyzed and reported at more relevant intervals.

### 5.3.2 Risk and Opportunity Assessment and Management

Management at Custom employs and incorporates risk based thinking in to the planning, implementation and execution of the QMS in an effort to both minimize risk to the business, the quality and delivery of product, but also to capitalize on opportunities that present themselves. This includes the establishment of risk and opportunity assessment and management policies by:

- Providing sufficient resources to carry out risk and opportunity management activities.
- Assigning responsibilities and authorities for risk and opportunity management activities.
- Reviewing information and results from audits and risk and opportunity management activities.

Risk and Opportunity Assessment and Management is governed in practice by a documented procedure.

## 5.4 Management Responsibility

### 5.4.1 Responsibility and Authority

An organizational chart has been established to show the structure of personnel in the organization. Roles and Responsibilities have been further defined in a documented procedure.

### **5.4.2 Management Representative**

The Quality Manager has been appointed by top management as management representative. As management representative, the Quality Manager has the following responsibility and authority to:

- Ensure that processes needed for the quality management system are established and implemented.
- Report to top management on the performance of the quality management system, and note needed improvements.
- Promote awareness of quality and customer requirements throughout the organization.
- Ensuring initiation of actions to minimize the likelihood of the occurrence of nonconformities through both risk assessment and employment of root cause analysis in both preventive and corrective actions.

## **5.5 Management Review**

### **5.5.1 General**

Top management reviews the QMS at least once every 12 months at management review meetings. This review assesses the continuing QMS suitability, adequacy and effectiveness, identifying opportunities for improvement and needed changes, including the quality policy and quality objectives. Review inputs and outputs, and associated records shall be maintained per the procedure and documented in the appropriate form – Management Review Minutes. The output of management review meetings will be recorded as a summary assessment of the overall effectiveness of the QMS, and will be used to guide decision making activities with regard to the strategic direction of the organization, as well as the direction of improvement of both the QMS and product supplied by Custom.

Management review meetings are conducted per the procedure – Management Review. Additional management reviews may be performed as deemed necessary based on the performance of the organization, and/or changes in the organization, or the business market.

## **6.0 Resource Management**

### **6.1 Provisions of Resources**

Top Management at Custom Spring is committed to providing all necessary resources required for the implementation and maintenance of an effective quality management system, as well as for the provision of quality product and services delivered to satisfy the needs, requirements and expectations of the customer. These resources include, but are not limited to:

- Human Resources
- Training
- Infrastructure- including buildings, work space, supplies, and utilities
- Technology- communication, information systems, hardware, software and support
- A suitable, safe and hospitable work environment
- Process, testing, inspection and production equipment and maintenance and software/support
- Transport
- Financial resources

Additional resources are provided by Top Management and Management as they are identified with the goal of continually improving both the QMS, and the quality of product.

### **6.2 Human Resources**

#### **6.2.1 General**

To ensure competence of our personnel as well as the protection of organizational knowledge that may be lost through natural attrition, and to maintain the level of quality and service that customers have become accustomed to, job descriptions have been prepared identifying the qualifications required for each position that affects product and service quality and/or delivery. Qualifications include requirements for education, skills and experience. Appropriate qualifications, along with required training, provide the competence required for each position. In addition, job descriptions outline the responsibilities associated with each position.

#### **6.2.2 Competence, Awareness and Training**

Top management identifies emerging competency needs during management reviews. Emergent competency needs are converted into job descriptions for the

type and number of positions that need to be filled through internal or external recruitment. Where required; competency training and monitoring is conducted in-house, although for more specialised skills, external courses are utilized.

Awareness of the quality policy, quality objectives, procedures, and processes controlled by the QMS is a top priority and a commitment of the management team at Premium. All employees are encouraged to take ownership of their role in the successful achievement of planned results, and the supply of the highest quality product and service to the customer.

Execution of training, awareness education and assessment of competency is controlled by documented procedure— Personnel Competency and Training Requirements.

### **6.3 Work Environment**

A work environment suitable for achieving product conformance, customer satisfaction and continual improvement is provided and maintained. Premium is committed to providing a hospitable work environment for all employees and interested parties. Requirements for the necessary infrastructure and work environment have been defined as the following:

- Building including office, warehouse, storage, inspection and testing space with shipping and receiving docks available, utilities, and options to accommodate growth as necessary.
- Technology and its support including computer hardware, software both fixed and portable, back up storage, IT system support, a functioning ERP system and web-based portal to accommodate offsite work, communication technology including email, phone, and fax when needed, as well as the security software and support to protect both proprietary information of the organization and the intellectual property of the customer.
- Process, production, inspection and testing equipment and the maintenance, calibration, and replacement/upgrade there of, including any required software.

## **7.0 Product Realization**

### **7.1 Customer Requirement (Contract Review)**

#### **7.1.1 Determining the requirements related to the Product**

Custom Spring determines customer requirements and the capability of the organization to meet or exceed those requirements before acceptance of an order. Customer requirements include those:

- Requested by the customer;
- Required for delivery and post-delivery activities;
- Not stated by the customer but necessary for specified use or known and intended use;
- Statutory and regulatory requirements related to the product;
- Industry standards

In the event that no documented requirements are provided by the customer, Custom shall confirm the requirements prior to acceptance of the order and document confirmation.

### **7.1.2 Review of requirements related to the Product**

Custom Spring will review requirements related to the product. The review is conducted before the order is accepted. The process ensures that:

- Product requirements are defined;
- Contract or order requirements differing from those previously expressed are resolved including revisions to specifications or prints;
- Records are maintained showing the results of the review and any actions arising from the review;
- When product requirements are changed, Custom Spring communicates changes to relevant personnel and amends relevant documents.
- Custom also reviews the capability of the organization to meet the product or service requirements prior to acceptance of the order.

### **7.1.3 Planning**

Custom Spring shall identify and plan the processes needed for product realization and shall address the following:

- Required resources and work environment
- Product and customer specified requirements
- Legal and other statutory requirements
- Contingencies based on risk assessment
- Required validation, verification, monitoring, measurement, inspection and test activities specific to the product and the acceptance criteria
- Management of Change

Records needed to provide evidence of conformance with requirements shall be maintained. Output of planning activities shall be documented and updated as changes occur. These records shall be maintained in a suitable manner for the organization's operations.

## **7.2 Purchasing**

### **7.2.1 Purchasing Process**

Documented procedures governing purchase and supplier control are followed to ensure that purchased product conforms to the specified purchase requirements. The procedure outlines the identification of criticality of goods or services to be purchased, and the extent of control required for suppliers. Suppliers are evaluated and selected based on their ability to supply product in accordance with requirements as outlined in the procedure. Criteria for selection, evaluation and re-evaluation are documented in the procedure. Records of the evaluation and any necessary actions are maintained as quality records. This procedure also outlines requirements for purchasing information, and the controls in place to ensure outsourced activities and processes adhere to the same standard of quality expected from Custom's in-house processes.

## **7.3 Production and service provision**

### **7.3.1 Control of Production and Service**

Custom Spring plans and carries out production provision under controlled conditions according to documented procedure— Control of Production and Service Provision. Controlled conditions include, as applicable:

- The availability of information that describes the characteristics of the product;
- The availability of work instructions;
- The use of suitable equipment;
- The availability and use of monitoring and measuring devices;
- The implementation of monitoring and measurement activities and the records thereof;
- The implementation of release and delivery activities, including post delivery activities that may be required.

### **7.3.2 Validation of processes for Production and service provision**

Custom Spring conducts validation of all process of production and service provision where:

- It is not possible to confirm by measurement that a product of service satisfies customer request

- As of the initial release of this document, this includes validation of NDE, welding, and heat treat processes as no other processes have been identified as having a unique inability to be verified via measurement or testing.

Where appropriate, as part of process validation, Custom determines:

- Criteria for review and approval of process
- Special work instructions if required
- Identification and traceability of product during the process, if applicable
- Need for revalidation based on results of validation.

### **7.3.3 Identification and Traceability**

Custom Spring identifies the product throughout product realization according to procedure – Identification and Traceability Procedure. Custom controls and records the unique identification of the product where ever traceability is a specified requirement.

### **7.3.4 Customer Property**

Custom Spring exercises care with customer property while it is under the organization's control or being used, and methods include the identification, verification, protection and safeguarding of customer property. This includes all intellectual property and data supplied by the customer for use in the provision of conforming product or service. Customer property is handled by Custom as per procedure– Customer Supplied Property. If any customer property is lost, damaged or otherwise found to be unsuitable for use, this is reported to the customer and records maintained.

### **7.3.5 Preservation of Product**

Custom Spring preserves the conformity of product during internal processing and delivery to the intended destination per– Handling and Preservation of Products Procedure. This preservation includes identification, handling, packaging, storage, assessment and protection. Preservation also applies to the constituent parts of a product.

## **7.4 Control of Monitoring and Measuring Devices**

Custom Spring has determined the monitoring and measurement activities to be undertaken and the monitoring and measuring devices needed to provide evidence of conformity of product to determined requirements. Procedure– Calibration and Control of Measuring Equipment describes the process that needs to be followed. Controlled processes ensure that monitoring and measurement practices are carried

out in a manner that is consistent with the stated requirements. Where necessary to ensure valid results, measuring equipment is:

- Calibrated or verified at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards
- Identified to enable the calibration status to be determined

In addition, Quality Control assesses and records the validity of the previous measuring results when the equipment is found not to conform to requirements.

## **8.0 Measurement, Analysis and Improvement**

### **8.1 General**

Custom Spring takes into consideration all contributing factors and the potential affects on customers and interested parties in determining which aspects of the quality management system and its processes are to be monitored, measured and evaluated. All monitoring, measuring and evaluation outputs are documented and analyzed per procedure— Analysis of Data, to determine process effectiveness and to ensure the capability of achieving in-tolerance results, and to identify opportunities for improvement.

- In-process checks relate to both quality control and productivity checks
- Provision is made for the identification and resolution of non-conformances
- The emphasis is to prevent any problems which might adversely affect customer satisfaction.

#### **8.1.1 Customer Satisfaction**

As one of the measurements of the performance of the quality management system, Custom Spring monitors information relating to customer perception as to whether the organization has fulfilled customer requirements per procedure – Customer Satisfaction.

### **8.2 Analysis and Evaluation**



Top management and other managers and supervisors collect and analyze data using appropriate statistical techniques to determine the suitability and effectiveness of quality management system processes and to identify opportunities for improvement per procedure – Analysis of Data. At a minimum, data is analyzed to assess achievement of the corporate level objectives and customer requirements. A process is effective if the desired results are measurably achieved. Effectiveness is measured in terms of product quality, process accuracy, delivery schedule performance, and levels of customer satisfaction.

### **8.3 Internal Audit**

Custom conducts Internal Audits per procedure– Internal Audit. Internal audit results are critical inputs that help to assess the effectiveness of our quality management system. Internal audits are conducted at planned intervals to determine whether the quality management system conforms our organization’s planned arrangements and to the requirements of ISO 9001:2015 and API-Q1.

### **8.4 Control of Non-conforming Products**

Custom Spring ensures that product which does not conform to product requirements is identified and controlled to prevent its unintended use or delivery. The controls and related responsibilities and authorities for dealing with nonconforming product are defined in the procedure - Control of Nonconforming Product. This procedure addresses the actions to be taken in the unlikely event of the release of nonconforming product as well.

### **8.5 Improvement**

#### **8.5.1 Continual Improvement**

Custom Spring improves the effectiveness of its quality management system through the effective application of the corporate policies, objectives, auditing and data analysis, corrective and preventive actions and management reviews.

The continual improvement process begins with management’s commitment to our quality policy and objectives for improvement, based on the strategic direction of our business plan and customer targets and goals. Customer satisfaction, internal audit data, process and product performance data, and risk control are used to identify additional opportunities for improvement.

#### **8.5.2 Corrective Action**

Custom Spring takes action to eliminate the cause of nonconformities in order to prevent recurrence. Corrective actions are appropriate to the effects of the nonconformities encountered. A documented procedure— Corrective Action, defines requirements for:

- Reviewing nonconformities (including customer complaints)
- Determining the root causes of nonconformities
- Evaluating the need for action to ensure that nonconformities do not recur
- Determining and implementing action needed
- Records of the results of action taken
- Reviewing corrective action taken to verify effectiveness of the action taken

### **8.5.3 Preventive Action**

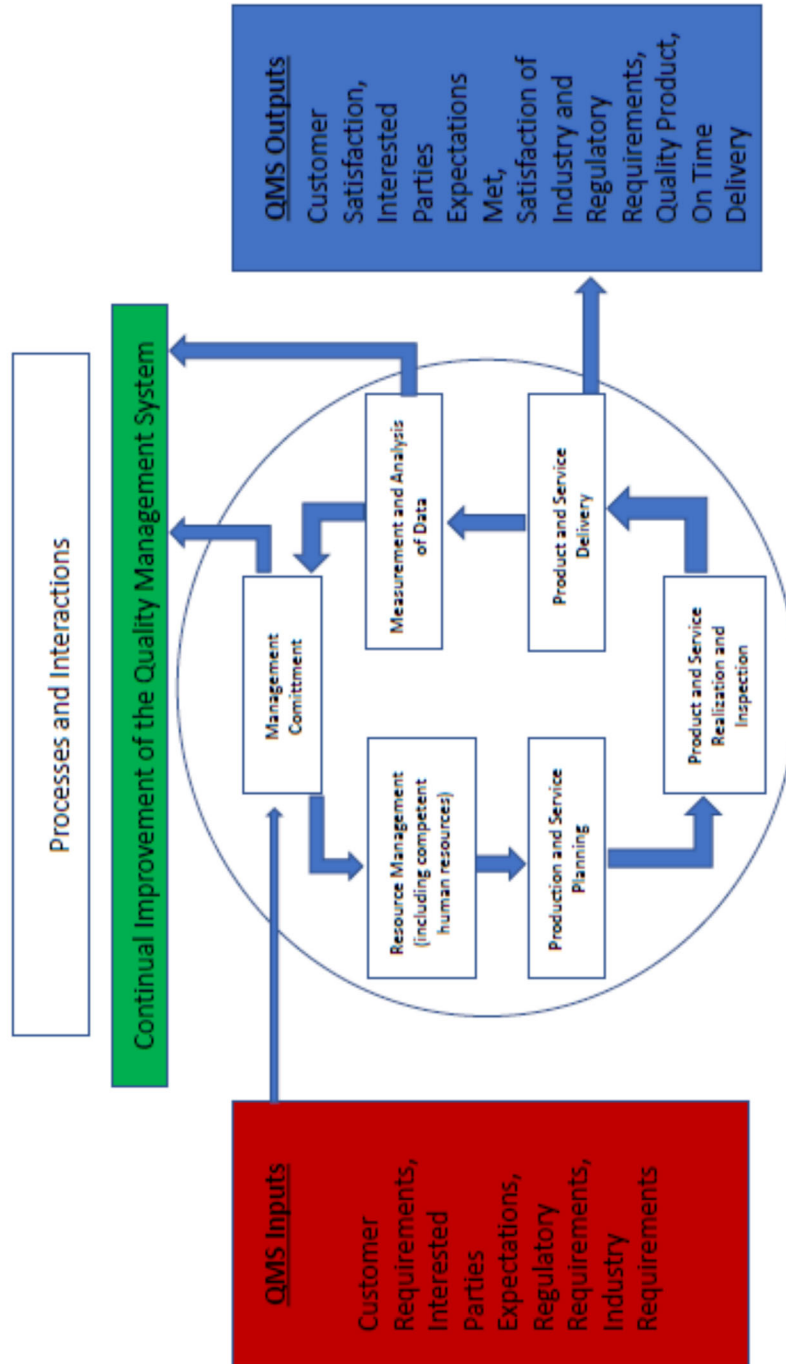
Custom Spring determines action to eliminate the causes of potential nonconformities based on risk assessment, and evaluation of current industry requirements, and current performance of products. Preventive actions are appropriate to the effects of the potential problems. A documented procedure - Preventive Action, defines requirements for:

- Determining potential nonconformities and their causes
- Evaluating the need for action to prevent occurrence of nonconformities
- Determining and implementing action needed
- Records of results of action taken
- Reviewing preventive action taken

### **8.5.4 Management of Change**

Custom ensures the integrity and sustainability of the QMS is maintained with changes to the business, product, or QMS are necessary. This is addressed in a documented procedure and includes changes in the organizational structure, key or essential personnel, critical suppliers, and changes resulting from preventive and corrective action, risk assessment, and both internal and external audits.

Appendix A



## Appendix B



# Quality Policy

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Custom Spring is committed to providing a quality product and superior service in the pursuit of the highest level of customer satisfaction through continuous improvement and an understanding of the needs, expectations and requirements of the industry and our customers.

## Appendix C

